Sri Shridevi Charitable Trust (R.)
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Sira Road, Tumkur - 572 106, Karnataka, India.
Phone: 0816 - 2212629 | Principal: 0816 - 2212627, 9686114899 | Telefax: 0816 - 2212628
Email: info@shrideviengineering.org, principal@shridevingineering.org | Website: www.shridevingineering.org
(Approved by AICTE, New Delhi, Recognised by Govt. of Karnataka and Affiliated to Visvesvaraya Technological University, Belagavi)

CRITERION 1- CURRICULAR ASPECTS

Criteria 1.1

Curriculum Planning and Implementation

APPORVED LESSION PLAN AND DELIVERY (CSE)

2017-18

PRINCIPAL
SIET., TUMAKURU

Shridevi Institute of Engineering and Technology-Tumkur
(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

***Cover Page*: Course Overview**
***Semester* : V Semester-"A" SEC** **Year: 2017-2018**

Course *Title:* **MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY**	*Course Code:* **15CS51**
Total contact Hours: 50	*Duration of Exam*: 03 Hrs.
*Total exam Marks:*80	*Total I.A.Marks:* 20
Course Plan Author: Prof. Kumar H.R	*Date: 28.07.2017*
Checked by: Prof.**C V Shanmuka Swamy**	*Date:* 05.08.2017

Prerequisites: None

Credits-04

Course Objectives:
This course will enable students to
1. Explain the Principles of Management, Organization and Entrepreneur.
2. Discuss the Planning, Staffing, ERP and their importance.
3. Infer the importance of intellectual property rights and relate the institutional support.

Course Outcomes:
The student should be able to :
1. Define Management, Organization and Entrepreneur, Planning, Staffing, ERP and outline the importance of Entrepreneurship.
2. Utilize the recourses available effectively through ERP.
3. Make use of IPRs and institutional support in Entrepreneurship.

COURSE PLAN
PLANNED AND EXECUTE

Name of the Staff: Prof. Kumar H R **Course Code: 15CS51**

Course: MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY **Class: V SEM "A" Sec**

Sl. No	Date	Topic Planned	Executed	Remarks
1	07/8/2017	**MODULE-1: MANAGEMENT:** Introduction. Meaning of Management.	Executed	
2	10/8/2017	Nature and characteristics of Management.	Executed	
3	11/8/2017	Scope and functional areas of management.	Executed	
4	12/8/2017	Goals of management. Levels of Management.	Executed	
5	14/8/2017	Evolution of management theories.	Executed	
6	17/8/2017	PLANNING: Nature.	Executed	
7	18/8/2017	Importance and purpose of planning. Steps in planning.	Executed	
8	19/8/2017	Nature of organization. Purpose of organization.	Executed	
9	21/8/2017	Types of organization. Staffing Meaning.	Executed	
10	24/8/2017	Process of recruitment and selection.	Executed	
11	26/8/2017	**MODULE-2: DIRECTING & CONTROLLING:** Meaning and nature of directing.	Executed	
12	28/8/2017	Leadership styles.	Executed	
13	31/8/2017	Motivation Theories.	Executed	
14	01/9/2017	Communication - Meaning and importance.	Executed	
15	04/9/2017	Coordination, meaning and importance.	Executed	
16	07/9/2017	Techniques of Coordination.	Executed	
17	08/9/2017	Controlling –Meaning.	Executed	
18	09/9/2017	Steps in Controlling.	Executed	
19	11/9/2017	Essentials of a sound control system.	Executed	
20	14/9/2017	Methods of establishing control.	Executed	
21	15/9/2017	**MODULE- 3: ENTREPRENEUR:**		
22	21/9/2017	Meaning of Entrepreneur.		
23	22/9/2017	Characteristics of Entrepreneurs.		
24	23/9/2017	Classification and Types of Entrepreneurs.		
25	25/9/2017	Various stages in entrepreneurial process.		
26	28/9/2017	Role of entrepreneurs in Economic Development.		
27	06/10/2017	Identification of business opportunities.		
28	07/10/2017	Market feasibility study.		
29	09/10/2017	Financial feasibility study.		
30	12/10/2017	Social feasibility study.		
31	13/10/2017	**MODULE-4: Preparation of project and ERP:** Meaning of project.		
32	14/10/2017	Project Identification.		
33	16/10/2017	Selection of Project.		
34	19/10/2017	Project Report. Need and significance of project report.		
35	21/10/2017	Contents, Formulation, Guidelines by Planning Commission for report.		
36	23/10/2017	Enterprise Recourse Planning: Meaning and Importance.		
37	26/10/2017	Functional areas of management.		
38	02/11/2017	Marketing /sales-supply chain management.		

39	03/11/2017	Finance and Accounting, Human recourses.		
40	04/11/2017	Types of reports and methods of report generation.		
41	09/11/2017	**MODULE-5: Micro and Small Enterprises:** Definition of Micro and Small Enterprises.		
42	10/11/2017	Characteristics and Advantages of Micro and Small Enterprises.		
43	11/11/2017	Steps in establishing Micro and Small Enterprises.		
44	13/11/2017	Government of India industrial policy 2007 on Micro and Small Enterprises.		
45	20/11/2017	**Case study: Micro soft.**		
46	21/11/2017	**Case study: Captain G R Gopinath.**		
47	22/11/2017	**Case study: N R Narayana Murthy &Infosys.**		
48	22/11/2017	Institutional support: MSME-D1, NSIC.		
49	23/11/2017	SIDBI, KIADB, KSSIDC.		
50	23/11/2017	TECKSOK, KSFC, DIC Single Window Agency, Introduction to IPR.		
51	24/11/2017	Revision.		
52	24/11/2017	Revision.		
53	25/11/2017	Revision.		
54	25/11/2017	Revision.		
55	25/11/2017	Revision.		

TEXT BOOKS:

1. **Principles of Management** – P.C.Tripathi, P.N. Reddy – Tata McGraw Hill, 2007. 4th or 6th Edition,2010.

2. **Dynamics of Entrepreneurial Development & Management** –Vasant Desai:Himalaya Publishing House.

3. **Entrepreneurship Development** –Small Business Enterprises, Poornima M Charantimath Pearson Education, 2006.

4. **Management and Entrepreneurship**- Kanishka Bedi-Oxford University Press-2017

REFERENCE BOOKS:

1. **Management Fundamentals Concepts, Application, Skill Development** –Robert Lussier –, Thompson, 2007.

2. **Entrepreneurship Development** – S. S. Khanka, S. Chand & Co.

3. **Management** – Stephen Robbins: 17th Edition, Pearson Education / PHI, 2003.

Prof. Kumar H R
Course-Instructor

Prof. C V Shanmuka Swamy
Head, Dept of CSE

Dr. Phani Raju H N
Principal

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SHRIDEVI Education

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/

WEF: 07/08/2017

Academic Year 2017-18 (ODD Sem)

LECTURE PLAN

Cover Page: Course Overview
Semester: V 'A'Semester

Year: 2017-2018

Course Title: **Computer Networks**	*Course Code:* **15CS52**
Total contact Hours: **50**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Ms. Prathibha T S**	*Date:* **07/08/2017**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **07/08/2017**

Objectives:

This course :

- Provides an exposure to current and emerging trends in Computer Architectures.
- The emphasis is on studying and analyzing fundamental issues in architecture design and their impact on performance.
- Focuses on advanced computer architectures and low-level system software such as pipelined and Multiprocessor systems.

Outcomes:

The student should be able to:

- Understand the advanced concepts of computer architecture.
- Investigating modern design structures of Pipelined and Multiprocessors systems.
- Become acquainted with recent computer architectures and I/O devices, as well as the low-level language required to drive/manage these types of advanced hardware.

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SHRIDEVI EDUCATION

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/ **WEF: 07/08/2017**

Staff: Ms. Prathibha T S **Class: V 'A' Sem**

Course Name : Computer Networks **Course Code: 15CS52**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		Module – 1 : Application Layer		
01	07/08/2017	Principles of Network Applications: Network Application Architectures,		
02	08/08/2017	Processes Communicating, Transport Services Available to Applications		
03	09/08/2017	Transport Services Provided by the Internet, Application-Layer Protocols.		
04	10/08/2017	The Web and HTTP: Overview of HTTP		
05	14/08/2017	Non-persistent and Persistent Connections.		
06	16/08/2017	HTTP Message Format		
07	17/08/2017	User-Server Interaction: Cookies, Web Caching, The Conditional GET		
08	21/08/2017	File Transfer: FTP Commands & Replies,		
09	22/08/2017	Electronic Mail in the Internet: SMTP Comparison with HTTP		
10	23/08/2017	Mail Message Format, Mail Access Protocols, DNS		
11	24/08/2017	The Internet's Directory Service: Services Provided by DNS		
12	28/08/2017	Overview of How DNS Works, DNS Records and Messages		
13	29/08/2017	Peer-to-Peer Applications: P2P File Distribution, Distributed Hash Tables, Socket Programming: creating Network Applications		
14	30/08/2017	Socket Programming with UDP, Socket Programming with TCP		
		Module -2 : Transport Layer		
15	31/08/2017	Introduction and Transport-Layer Services: Relationship.		
16	04/09/2017	Between Transport and Network Layers, Overview of the Transport Layer in the Internet		
17	05/09/2017	Multiplexing and Demultiplexing: Connectionless Transport: UDP,UDP Segment Structure		
18	06/09/2017	UDP Checksum, Principles of Reliable Data Transfer, Building a Reliable Data Transfer Protocol		
19	07/09/2017	Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat		
20	11/09/2017	Connection-Oriented Transport TCP:		

		The TCP Connection, TCP Segment Structure. Round-Trip Time Estimation and Timeout. Reliable Data Transfer		
21	12/09/2017	Flow Control, TCP Connection Management		
22	13/09/2017	Principles of Congestion Control: The Causes and the Costs of Congestion		
23	14/09/2017	Approaches to Congestion Control, Network-assisted congestion-control example		
24	21/09/2017	ATM ABR Congestion control, TCP Congestion Control: Fairness.		
25	25/09/2017			
Module -3 : The Network Layer				
26	26/09/2017	What's Inside a Router?: Input Processing, Switching, IPv6, A Brief foray into IP Security.		
27	27/09/2017	Output Processing, Where Does Queuing Occur? Routing control plane.		
28	28/09/2017	Routing Algorithms: The Link-State (LS) Routing Algorithm.		
29	03/10/2017	The Distance-Vector (DV) Routing Algorithm, Hierarchical Routing.		
30	04/10/2017	Routing in the Internet, Intra-AS Routing in the Internet: RIP.		
31	09/10/2017	Intra-AS Routing in the Internet: OSPF, Inter/AS Routing: BGP, Broadcast Routing Algorithms and Multicast.		
Module -4 : Wireless and Mobile Networks				
32	10/10/2017	Cellular Internet Access: An Overview of Cellular Network Architecture		
33	11/10/2017	3G Cellular Data Networks: Extending the Internet to Cellular subscribers		
34	12/10/2017	On to 4G:LTE,Mobility management: Principles, Addressing		
35	16/10/2017	Routing to a mobile node, Mobile IP		
36	17/10/2017	Managing mobility in cellular Networks, Routing calls to a Mobile user, Handoffs in GSM		
37	19/10/2017	Wireless and Mobility: Impact on Higher-layer protocols.		
Module -5 : Multimedia Networking				
38	23/10/2017	Properties of video, properties of Audio		
39	24/10/2017	Types of multimedia Network Applications		
40	25/10/2017	Streaming stored video: UDP Streaming, HTTP Streaming		
41	26/10/2017	Adaptive streaming and DASH, content distribution Networks, case studies: Netflix, You Tube and Kankan.		
42	31/10/2017	**Network Support for Multimedia:** Dimensioning Best-Effort Networks		
43	01/11/2017	Providing Multiple Classes of Service, Diffserv		
44	02/11/2017	Per-Connection Quality-of-Service (QoS) Guarantees: Resource Reservation and Call Admission		

45	07/11/2017	Revision		
46	08/11/2017	Previous Question Paper Discussion		
47	09/11/2017	Previous Question Paper Discussion		
48	13/11/2017	Previous Question Paper Discussion		
49	14/11/2017	Previous Question Paper Discussion		
50	20/11/2017	Previous Question Paper Discussion		

Text Books:

1. James F Kurose and Keith W Ross, Computer Networking, A Top-Down Approach, Sixth edition, Pearson,2017

Reference Books:

1. Behrouz A Forouzan, Data and Communications and Networking, Fifth Edition, McGraw Hill, Indian Edition
2. Larry L Peterson and Brusce S Davie, Computer Networks, fifth edition, ELSEVIER
3. Andrew S Tanenbaum, Computer Networks, fifth edition, Pearson Mayank Dave, Computer Networks, Second edition, Cengage Learning
4. David E. Culler, Jaswinder Pal Singh, Anoop Gupta: Parallel Computer Architecture, A Hardware / Software Approach, Morgan Kaufman, 1999.

[Ms. Prathibha T S]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

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SHRIDEVI EDUCATION

Shridevi Institute of Engineering and Technology-Tumkur
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Cover Page: Course Overview
Semester: V Semester- A SEC **Year: 2017-18**

Course : **Database Management System**	Course Code: **15CS53**
Total contact Hours: **53**	Duration of Exam: **03 Hrs.**
Total exam marks: **80** **Credits:4**	Total I.A. marks: **20**
Lesson plan author: **Ms. Meghana D K**	Date: **05/08/2017**
Checked by: **Prof C.V Shanmuka swamy**	Date: **05/08/2017**

Course objectives:

This course will enable students to

- Provide a strong foundation in database concepts, technology, and practice.
- Practice SQL programming through a variety of database problems.
- Demonstrate the use of concurrency and transactions in database
- Design and build database applications for real world problems.

Course outcomes:

The students should be able to:

- Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
- Use Structured Query Language (SQL) for database manipulation.
- Design and build simple database systems
- Develop application to interact with databases.

Shridevi Institute of Engineering and Technology-Tumkur
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

LECTURE PLAN

Name of the Staff: Ms. Meghana D K **Course Code:** 15CS53

Class: V SEM CSE, "A" Section **Course:** Database Management Systems

Sl. No.	DATE	TOPIC	TOPICS COVERED	REMARKS
01	08/08/17	**MODULE-1 INTRODUCTION:** Introduction;		
02	08/08/17	Characteristics of Database approach.		Extra
03	09/08/17	Advantages of using DBMS approach; History of database applications.		
04	10/08/17	**Overview of Database Languages and Architectures:** Data models, schemas and instances;		
05	12/08/17	Three-schema architecture and data independence;		
06	16/08/17	Database languages and interfaces;		
07	17/08/17	The database system environment;		
08	19/08/17	**Conceptual Data Modelling using Entities and Relationships:** Entity Types, Entity Sets,		
09	22/08/17	Attributes and Keys roles, and structural constraints		
10	22/08/17	Weak Entity Types;		Extra
11	23/08/17	ER diagrams,examples, Specialization and Generalization.		
12	24/08/17	**MODULE-2 Relational Model**: Relational Model Concepts,		
13	26/08/17	Relational Model Constraints and relational database schemas, and relational database schemas,		
14	29/08/17	Update operations, transactions, and dealing with constraint violations		
15	30/08/17	**Relational Algebra:** Unary and Binary relational operations,		
16	31/08/17	Additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra.		
17	05/09/17	**Mapping Conceptual Design into a Logical Design:** Relational Database Design using ER-to-Relational mapping.		
18	06/09/17	**SQL:** SQL data definition and data types,		
19	07/09/17	specifying constraints in SQL, retrieval queries in SQL,		
20	09/09/17	INSERT, DELETE, and UPDATE statements in SQL,		
21	12/09/17	Additional features of SQL.		
22	13/09/17	**MODULE-3 SQL : Advances Queries:** More complex SQL retrieval queries,		
23	14/09/17	Specifying constraints as assertions and action triggers,		
24	21/09/17	Views in SQL,		
25	23/09/17	Schema change statements in SQL.		
26	26/09/17	**Database Application Development:** Accessing databases from applications,		
27	27/09/17	An introduction to JDBC, JDBC classes and interfaces,		
28	28/09/17	SQLJ, Stored procedures,		
29	03/10/17	Case study: The internet Bookshop.		

30	04/10/17	**Internet Applications:** The three-Tier application architecture,		
31	07/10/17	The presentation layer, The Middle Tier		
32	10/10/17	**MODULE–4 Normalization: Database Design Theory** – Introduction to Normalization using Functional and Multivalued Dependencies:		
33	11/10/17	Informal design guidelines for relation schema,		
34	12/10/17	Functional Dependencies, Normal Forms based on Primary keys		
35	14/10/17	Second and Third Normal Forms,		
36	17/10/17	Boyce-Codd Normal Form,		
37	21/10/17	Multivalued Dependency and Fourth Normal Form,		
38	24/10/17	Join Dependencies and Fifth Normal Form.		
39	25/10/17	**Normalization Algorithms:** Inference Rules, Equivalence, and Minimal Cover,		
40	26/10/17	Properties of Relational Decompositions, Algorithms for Relational Database Schema Design,		
41	31/10/17	Nulls, Dangling tuples, and alternate Relational Designs,		
42	02/11/17	Further discussion of Multivalued dependencies and 4NF, Other dependencies and Normal Forms		
43	04/11/17	**MODULE-5 Transaction Processing:** Introduction to Transaction Processing,		
44	07/11/17	Transaction and System concepts,		
45	08/11/17	Desirable properties of Transactions, Characterizing schedules based on recoverability,		
46	09/11/17	Characterizing schedules based on Serializability, Transaction support in SQL.		
47	11/11/17	**Concurrency Control in Databases:** Two-phase locking techniques for Concurrency control,		
48	14/11/17	Concurrency control based on Timestamp ordering,		
49	15/11/17	Multiversion Concurrency control techniques,		
50	21/11/17	Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking.		
51	22/11/17	**Introduction to Database Recovery Protocols:** Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update,		
52	23/11/17	Recovery techniques based on immediate update, Shadow paging, Database backup and recovery from catastrophic failures		
53	25/11/17	Revision ; Question paper discussion		

TEXT BOOKS:

1. **Database systems Models, Languages, Design and Application Programming,** RamezElmasri and Shamkant B. Navathe, 7th Edition, 2017, Pearson.
2. **Database management systems**, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, **Database System Concepts,** 6th Edition, Mc-GrawHill, 2013.
2. Coronel, Morris, and Rob, **Database Principles Fundamentals of Design, Implementation and Management,** Cengage Learning 2012.

Meghana-D.K

[Ms. Meghana D K]
Staff Incharge

[Prof C.V. Shanmukeswamy]
Head, Dept of CSE

[Dr H.B.Phani Raju]
Principal

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Cover Page: Course Overview
Semester: V Semester-A section

Year: 2017-18

Course Title: **AUTOMATA THEORY AND COMPUTABILITY**	*Course Code:* **15CS54**
Total contact Hours: **53**	*Duration of Exam*: **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Mr. Kiran G M**	*Date:* **05 /08/2017**
Checked by: **Prof. C.V Shanmukaswamy**	*Date:* **07/08/2017**

Objectives:

This course will enable students to:

- Introduce core concepts in Automata and Theory of Computation.
- Identify different Formal language Classes and their Relationships.
- Design Grammars and Recognizers for different formal languages.
- Prove or disprove theorems in automata theory using their properties.
- Determine the decidability and intractability of Computational problems.

Outcomes:

The student should be able to:

- Acquire fundamental understanding of the core concepts in automata theory and Theory of Computation
- Learn how to translate between different models of Computation (e.g.,Deterministic and Non-deterministic and Software models).
- Design Grammars and Automata (recognizers) for different language classes and become knowledgeable about restricted models of Computation (Regular, Context Free) and their relative powers.
- Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.
- Classify a problem with respect to different models of Computation.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Staff: Mr. Kiran G M — **Class: V Sem 'A' Sec**
Course: Formal Languages And Automata Theory — **Sub. Code: 15CS54**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	07/08/17	**MODULE-1: 10 Hours** **Why study the Theory of Computation, Languages and Strings**: Strings, Languages.		
02	09/08/17	A Language Hierarchy, Computation,		
03	10/08/17	**Finite State Machines (FSM)**: Deterministic FSM,		**Extra Class**
04	12/08/17	Regular languages,		
05	14/08/17	Designing FSM, Nondeterministic FSMs,		
06	16/08/17	From FSMs to Operational Systems, Simulators for FSMs,		
07	18/08/17	Minimizing FSMs,		
08	19/08/17	Canonical form of Regular languages,		
09	21/08/17	Finite State Transducers,		
10	23/08/17	Bidirectional Transducers.		
11	24/08/17	**MODULE – 2 10 Hours** Regular Expressions (RE): what is a RE?, Kleene's theorem,		
12	26/08/17	Applications of REs, Manipulating and Simplifying REs.		
13	28/08/17	Manipulating and Simplifying REs.		
14	30/08/17	Regular Grammars: Definition, Regular Grammars		
15	01/09/17	Regular Grammars		
16	04/09/17	and Regular languages.		
17	06/09/17	Regular Languages (RL) and Nonregular Languages: How many RLs,		
18	07/09/17	To show that a language is regular,		**Extra Class**
19	08/09/17	Closure properties of RLs,		
20	09/09/17	to show some languages are not RLs.		
21	11/09/17	**MODULE – 3 10 Hours** Context-Free Grammars(CFG): Introduction to Rewrite Systems and Grammars,		
22	13/09/17	CFGs and languages, designing CFGs,		
23	15/09/17	simplifying CFGs, proving that a Grammar is correct,		
24	22/09/17	Derivation and Parse trees,		
25	23/09/17	Ambiguity, Normal Forms.		
26	25/09/17	Pushdown Automata (PDA): Definition of non-deterministic PDA, Deterministic and		
27	27/09/17	Non-deterministic PDAs,		
28	02/10/17	Non-determinism and Halting,		
29	04/10/17	Alternative equivalent definitions of a PDA,		

30	06/10/17	alternatives that are not equivalent to PDA.		
31	07/10/17	**Module – 4 10 Hours** Context-Free and Non-Context-Free Languages: Where do the Context-Free Languages(CFL) fit,		
32	09/10/17	Showing a language is context-free,		
33	11/10/17	Pumping theorem for CFL,		
34	13/10/17	Important closure properties of CFLs,		
35	14/10/17	Deterministic CFLs.		**Extra Class**
36	16/10/17	Algorithms and Decision Procedures for CFLs: Decidable questions, Un-decidable questions.		
37	21/10/17	Turing Machine: Turing machine model,		
38	23/10/17	Representation, Language acceptability by TM,		
39	25/10/17	design of TM,		
40	03/11/17	Techniques for TM construction.		
41	04/11/17	**MODULE – 5 10 Hours** Variants of Turing Machines (TM),		
42	08/11/17	The model of Linear Bounded automata:		
43	10/11/17	Decidability: Definition of an algorithm,decidability,		
44	13/11/17	decidable languages,		
45	15/11/17	Undecidable languages,		
46	20/11/17	halting problem of TM, Post correspondence problem.		
47	20/11/17	Complexity: Growth rate of functions,		
48	22/11/17	the classes of P and NP,		
49	23/11/17	Quantum Computation: quantum computers,		
50	24/11/17	Church-Turing thesis.		**Extra Class**

Text Books:

1. Elaine Rich, Automata, Computability and Complexity, 1st Edition, Pearson Education,2012/2013
2. K L P Mishra, N Chandrasekaran , 3rd Edition, Theory of Computer Science, PhI, 2012.

Textbook 1: Ch 1,2, 3,4, 5.1 to 5.10 Textbook 1: Ch 6, 7, 8: 6.1 to 6.4, 7.1, 7.2, 8.1 to 8.4
Textbook 1: Ch 11, 12: 11.1 to 11.8, 12.1, 12.2, 12,4, 12.5, 12.6 Textbook 1: Ch 13: 13.1 to 13.5, Ch 14: 14.1, 14.2,
Textbook 2: Ch 9.1 to 9.6 Textbook 2: Ch 9.7 to 9.8, 10.1 to 10.7, 12.1, 12.2, 12.8, 12.8.1, 12.8.2

Reference Books:

1. John E Hopcroft, Rajeev Motwani, Jeffery D Ullman, Introduction to AutomataTheory, Languages, and Computation, 3rd Edition, Pearson Education, 2013
2. Michael Sipser : Introduction to the Theory of Computation, 3rd edition, Cengage learning,2013
3. John C Martin, Introduction to Languages and The Theory of Computation, 3rd Edition, Tata McGraw –Hill Publishing Company Limited, 2013
4. Peter Linz, "An Introduction to Formal Languages and Automata", 3rd Edition, Narosa Publishers, 1998
5. Basavaraj S. Anami, Karibasappa K G, Formal Languages and Automata theory, Wiley India, 2012
6. C K Nagpal, Formal Languages and Automata Theory, Oxford University press, 2012.

[Mr. Kiran G M]
Staff Icharge

[Prof. C.V Shanmukaswamy]
HOD, CSE

[Dr. H.B Phaniraju]
Principal

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COURSE PLAN

***Cover Page*: Subject Overview**
***Semester: V Semester-* 'A' SEC** **Year:2017-18**

Subject Title: **OBJECT-ORIENTED MODELING AND DESIGN**	*Subject Code:* 15CS551
Total contact Hours: 50	*Duration of Exam*: 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Suthan R	*Date:05/08/2017*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 07/08/2017

***Prerequisites*:** None

Objectives:
The students will learn

- Demonstrate concept of use-case model, sequence model and state chart model for a given problem.
- Explain the facets of the unified process approach to design and build a Software system.
- Translate the requirements into implementation for Object Oriented design.
- Choose an appropriate design pattern to facilitate development procedure.

Outcomes:

The student should be

- Describe the concepts of object-oriented and basic class modelling.
- Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.
- Choose and apply a befitting design pattern for the given problem.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2017-18 (3rd Sem)

COURSE PLAN

Staff : Mr.Suthan R **Class** :V-"A"
Subject :Object Oriented Modeling And Design **Sub.Code** : 15CS551

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
1	08/08/17	**PART-A** **Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development?		
2	09/08/17	OO Themes; Evidence for usefulness of OO development;		
3	10/08/17	OO modelling history. Modelling as Design technique: Modelling; abstraction;		
4	11/08/17	The Three models. Class Modelling: Object and Class Concept;		
5	16/08/17	Link and associations concepts; Generalization and Inheritance;		
6	17/08/17	A sample class model; Navigation of class models; Advanced Class Modelling,		
7	18/08/17	Advanced object and class concepts; Association ends;		
8	22/08/17	N-ary associations; Aggregation; Abstract classes;		
9	23/08/17	Multiple inheritance; Metadata; Reification; Constraints;		
10	24/08/17	Derived Data; Packages. Question papers solvation		
11	24/08/17	**Module – 2:** UseCase Modelling and Detailed Requirements		Extra
12	25/08/17	Overview; Detailed objectoriented Requirements definitions		
13	29/08/17	System Processes-A use case/Scenario view		
14	30/08/17	Identifying Input and outputs-The System sequence diagram		
15	31/08/17	Identifying Input and outputs-The System sequence diagram cont…		
16	01/09/17	Identifying Object Behaviour-		
17	05/09/17	Identifying Object Behaviour cont…		
18	06/09/17	The state chart Diagram		
19	07/09/17	Integrated Object-oriented Models.		
20	08/09/17	Question papers solvation		
21	12/09/17	**Module – 3:** Process Overview		
22	13/09/17	System Conception and Domain Analysis		
23	14/09/17	Process Overview: Development stages;		Extra
24	15/09/17	Development life Cycle		
25	22/09/17	System Conception: Devising a system concept;		
26	26/08/17	Elaborating a concept; preparing a problem statement		
27	27/08/17	Domain Analysis: Overview of analysis		
28	28/09/17	Domain Class model: Domain state model		
29	03/10/17	Domain interaction model Iterating the analysis		
30	04/10/17	Question papers solvation		

31	06/10/17	**Module – 4:** Use case Realization :The Design Discipline within up iterations:		
32	10/10/17	Object Oriented Design-The Bridge between Requirements and Implementation		
33	10/10/17	Object Oriented Design-The Bridge between Requirements and Implementation cont….		Extra
34	11/10/17	Design Classes and Design within Class Diagrams;		
35	12/10/17	Interaction Diagrams-Realizing Use Case and defining methods;		
36	13/10/17	Designing with Communication Diagrams		
37	17/10/17	Updating the Design Class Diagram;		
38	23/08/17	Package Diagrams-Structuring the Major Components;		
39	24/08/17	Implementation Issues for Three-Layer Design.		
40	25/08/17	Question papers solvation		
41	31/10/17	**Module – 5:** Design Patterns: Introduction; what is a design pattern?,		
42	02/11/17	Describing design patterns,		
43	03/11/17	the catalogue of design patterns,		
44	07/11/17	Organizing the catalogue, How design patterns solve design problems,		
45	07/11/17	how to select a design patterns		Extra
46	08/11/17	how to use a design pattern;		
47	09/11/17	Creational patterns: prototype and singleton (only);		
48	10/11/17	Creational patterns: prototype and singleton (only); cont…		
49	14/11/17	Structural patterns adaptor and proxy (only)		
50	15/01/17	Question papers solvation		

TEXT BOOKS:

1. Michael Blaha, James Rumbaugh: Object Oriented Modelling and Design with UML,2nd Edition, Pearson Education,2005
2. Satzinger, Jackson and Burd: Object-Oriented Analysis & Design with the Unified Process, Cengage Learning, 2005.
3. Erich Gamma, Richard Helm, Ralph Johnson and john Vlissides: Design Patterns – Elements of Reusable Object-Oriented Software, Pearson Education,2007.

REFERENCE BOOKS:

1. Grady Booch et. al.: Object-Oriented Analysis and Design with Applications,3rd Edition,Pearson Education,2007.
2. Frank Buschmann, RegineMeunier, Hans Rohnert, Peter Sommerlad, Michel Stal: Pattern –Oriented Software Architecture. A system of patterns , Volume 1, John Wiley and Sons.2007.
3. Booch, Jacobson, Rambaugh : Object-Oriented Analysis and Design with Applications, 3rd edition, pearson, Reprint 2013

[Suthan R] [Prof. C V Shanmukaswamy] [Dr. H B Phani Raju]

Staff Incharge **HOD, CSE** **Principal**

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2017-18(ODD Semester)

COURSE LECTURE PLAN

***Cover Page*: Course Overview**
Semester **: V B Sec** **Year: 2017-2018**

Course Title: **Management and Entrepreneurship for IT Industry**	*Subject Code:* **15CS51**
Total contact Hours: 54	*Duration of Exam*: 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Lesson plan author: Mr. Chethan M S	*Date:* 07/08/2017
Checked by: Prof. C V Shanmukaswamy	*Date:* 07/08/2017

Course objectives:

This course will enable students to

- Explain the principles of management, organization and entrepreneur.
- Discuss on planning, staffing, ERP and their importance.
- Infer the importance of intellectual property rights and relate the institutional support

Course outcomes:

After studying this course, students will be able to:

- Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship.
- Utilize the resources available effectively through ERP.
- Make use of IPRs and institutional support in entrepreneurship.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	09/08/17	**MODULE-1. Introduction** -: Meaning, Nature and characteristics of Management		
02	10/08/17	Scope and functional areas of management,		
03	11/08/17	Goals of Management, Levels of Management		
04	12/08/17	brief overview of evolution of management theories		
05	16/08/17	Planning- Nature, importance,		
06	17/08/17	types of plans, steps in planning,		
07	18/08/17	Organizing- nature and purpose,		
08	23/08/17	types of Organization,		
09	19/08/17	types of Organization continued…		
10	24/08/17	Staffing- meaning,		
11	26/08/17	process of recruitment and selection		
12	30/08/17	**MODULE-2. Directing and controlling-**		
13	31/08/17	meaning and nature of directing		
14	31/08/17	leadership styles,		
15	01/09/17	motivation Theories,		
16	06/09/17	Communication- Meaning and importance,		
17	07/09/17	Communication- Meaning and importance continued…..		
18	08/09/17	Coordination meaning and importance,		
19	09/09/17	Coordination meaning and importance continued…..		
20	13/09/17	Controlling- meaning,		
21	14/09/17	steps in controlling,		
22	15/09/17	methods of establishing control.		
23	21/09/17	**MODULE-3. Entrepreneur** – meaning of entrepreneur,		
24	22/09/17	characteristics of entrepreneurs,		
25	23/09/17	classification and types of entrepreneurs,		
26	27/09/17	various stages in entrepreneurial process,		
27	28/09/17	role of entrepreneurs in economic development,		
28	29/09/16	Entrepreneurship in India and barriers to entrepreneurship.		
29	30/09/17	Identification of business opportunities,		
30	04/10/17	market feasibility study,		
31	06/10/17	technical feasibility stud		
32	07/10/17	financial feasibility study and social feasibility study		
33	11/10/17	financial feasibility study and social feasibility study continued…..		
34	12/10/17	**MODULE-4. Preparation of project and ERP** - meaning of project,		
35	13/10/17	project identification,		

36	14/10/17	project selection,		
37	19/10/17	project report, need and significance of project report,		
38	21/10/17	contents, formulation,		
39	25/10/17	guidelines by planning commission for project report,		
40	26/10/17	**Resource Planning: Meaning and Importance- ERP**		
41	02/11/17	**ERP** and Functional areas of Management		
42	03/11/17	Marketing / Sales- Supply Chain Management, Finance and Accounting		
43	04/11/17	Human Resources – Types of reports and methods of report generation		
44	04/11/17	**MODULE-5. Micro and Small Enterprises:** Definition of micro and small enterprises,		Extra
45	08/11/17	characteristics and advantages of micro and small enterprises,		
46	09/11/17	steps in establishing micro and small enterprises,		
47	09/11/17	Government of India indusial policy 2007 on micro and small enterprises,		Extra
48	10/11/17	case study (Microsoft), Case study(Captain G R Gopinath)		
49	11/11/17	Case study (N R Narayana Murthy & Infosys),		
50	15/11/17	**Institutional support:** MSME-DI, NSIC,		
51	22/11/17	SIDBI, KIADB, KSSIDC, TECSOK, KSFC,		
52	23/11/17	DIC and District level single window agency,		
53	23/11/17	**Introduction to IPR.**		Extra
54	24/11/17	Revision, Question Paper Discussion		

Text Books:

1. Principles of Management -P. C. Tripathi, P. N. Reddy; Tata McGraw Hill, 4th / 6th Edition, 2010.
2. Dynamics of Entrepreneurial Development & Management -Vasant Desai Himalaya Publishing House.
3. Entrepreneurship Development -Small Business Enterprises -Poornima M Charantimath Pearson Education – 2006.
4. Management and Entrepreneurship - Kanishka Bedi- Oxford University Press-2017

Reference Books:

1. Management Fundamentals -Concepts, Application, Skill Development Robert Lusier Thomson.
2. Entrepreneurship Development -S S Khanka -S Chand & Co.
3. Management -Stephen Robbins -Pearson Education /PHI -17th Edition, 2003

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
Head, Dept of CSE

H.O.D.
Dept. of C.S. & E.,
SIET., TUMKUR-6.

Dr. H B Phani Raju
Principal

PRINCIPAL
SIET., TUMAKURU.

Sri Shridevi Charitable Trust (R)
SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
Sira Road, Tumkur – 572 106. Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/ WEF: 07/08/2017

Academic Year 2017-18 (ODD Sem)

LECTURE PLAN

***Cover Page*: Course Overview**
Semester: V Semester **Year: 2017-2018**

Course Title: **Computer Networks**	*Course Code:* **15CS52**
Total contact Hours: ***50***	*Duration of Exam*: **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Mrs. Beena G Pillai**	*Date:* **07/08/2017**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **07/08/2017**

Objectives:

This course :

- Provides an exposure to current and emerging trends in Computer Architectures.
- The emphasis is on studying and analyzing fundamental issues in architecture design and their impact on performance.
- Focuses on advanced computer architectures and low-level system software such as pipelined and Multiprocessor systems.

Outcomes:

The student should be able to:

- Understand the advanced concepts of computer architecture.
- Investigating modern design structures of Pipelined and Multiprocessors systems.
- Become acquainted with recent computer architectures and I/O devices, as well as the low-level language required to drive/manage these types of advanced hardware.

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Sira Road, Tumkur – 572 106. Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/ WEF: 07/08/2017

Staff: Mrs. Beena G Pillai **Class: V Sem**
Course Name : Computer Networks **Course Code: 15CS52**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
Module – 1 : Application Layer				
01	07/08/2017	Principles of Network Applications: Network Application Architectures,		
02	08/08/2017	Processes Communicating, Transport Services Available to Applications		
03	10/08/2017	Transport Services Provided by the Internet, Application-Layer Protocols.		
04	11/08/2017	The Web and HTTP: Overview of HTTP		
05	14/08/2017	Non-persistent and Persistent Connections.		
06	17/08/2017	HTTP Message Format		
07	18/08/2017	User-Server Interaction: Cookies, Web Caching, The Conditional GET		
08	21/08/2017	File Transfer: FTP Commands & Replies,		
09	22/08/2017	Electronic Mail in the Internet: SMTP Comparison with HTTP		
10	24/08/2017	Mail Message Format, Mail Access Protocols, DNS		
11	28/08/2017	The Internet's Directory Service: Services Provided by DNS		
12	29/08/2017	Overview of How DNS Works, DNS Records and Messages		
13	31/08/2017	Peer-to-Peer Applications: P2P File Distribution, Distributed Hash Tables, Socket Programming: creating Network Applications		
14	01/09/2017	Socket Programming with UDP, Socket Programming with TCP		
Module -2 : Transport Layer				
15	04/09/2017	Introduction and Transport-Layer Services: Relationship.		
16	05/09/2017	Between Transport and Network Layers, Overview of the Transport Layer in the Internet		
17	07/09/2017	Multiplexing and Demultiplexing: Connectionless Transport: UDP,UDP Segment Structure		
18	08/09/2017	UDP Checksum, Principles of Reliable Data Transfer, Building a Reliable Data Transfer Protocol		
19	09/09/2017	Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat		**Extra Class: Time: 12: 30am - 1:30pm**

20	11/09/2017	Connection-Oriented Transport TCP: The TCP Connection, TCP Segment Structure. Round-Trip Time Estimation and Timeout. Reliable Data Transfer		
21	12/09/2017	Flow Control, TCP Connection Management		
22	14/09/2017	Principles of Congestion Control: The Causes and the Costs of Congestion		
23	15/09/2017	Approaches to Congestion Control, Network-assisted congestion-control example		
24	21/09/2017	ATM ABR Congestion control, TCP Congestion Control: Fairness.		
25	22/09/2017			
Module -3 : The Network Layer				
26	25/09/2017	What's Inside a Router?: Input Processing, Switching, IPv6, A Brief foray into IP Security.		
27	26/09/2017	Output Processing, Where Does Queuing Occur? Routing control plane.		
28	28/09/2017	Routing Algorithms: The Link-State (LS) Routing Algorithm.		
29	03/10/2017	The Distance-Vector (DV) Routing Algorithm, Hierarchical Routing.		
30	06/10/2017	Routing in the Internet, Intra-AS Routing in the Internet: RIP.		
31	07/10/2017	Intra-AS Routing in the Internet: OSPF, Inter/AS Routing: BGP, Broadcast Routing Algorithms and Multicast.		**Extra Class: Time: 12: 30am - 1:30pm**
Module -4 : Wireless and Mobile Networks				
32	09/10/2017	Cellular Internet Access: An Overview of Cellular Network Architecture		
33	10/10/2017	3G Cellular Data Networks: Extending the Internet to Cellular subscribers		
34	12/10/2017	On to 4G:LTE,Mobility management: Principles, Addressing		
35	13/10/2017	Routing to a mobile node, Mobile IP		
36	16/10/2017	Managing mobility in cellular Networks, Routing calls to a Mobile user, Handoffs in GSM		
37	17/10/2017	Wireless and Mobility: Impact on Higher-layer protocols.		
Module -5 : Multimedia Networking				
38	19/10/2017	Properties of video, properties of Audio		
39	23/10/2017	Types of multimedia Network Applications		
40	24/10/2017	Streaming stored video: UDP Streaming, HTTP Streaming		
41	26/10/2017	Adaptive streaming and DASH, content distribution Networks, case studies: Netflix, You Tube and Kankan.		
42	31/10/2017	**Network Support for Multimedia:** Dimensioning Best-Effort Networks		
43	02/11/2017	Providing Multiple Classes of Service, Diffserv		
44	03/11/2017	Per-Connection Quality-of-Service (QoS) Guarantees: Resource Reservation		

		and Call Admission		
45	04/11/2017	Revision		**Extra Class: Time: 12: 30am - 1:30pm**
46	07/11/2017	Previous Question Paper Discussion		
47	09/11/2017	Previous Question Paper Discussion		
48	10/11/2017	Previous Question Paper Discussion		
49	13/11/2017	Previous Question Paper Discussion		
50	14/11/2017	Previous Question Paper Discussion		

Text Books:

1. James F Kurose and Keith W Ross, Computer Networking, A Top-Down Approach, Sixth edition, Pearson,2017

Reference Books:

1. Behrouz A Forouzan, Data and Communications and Networking, Fifth Edition, McGraw Hill, Indian Edition
2. Larry L Peterson and Brusce S Davie, Computer Networks, fifth edition, ELSEVIER
3. Andrew S Tanenbaum, Computer Networks, fifth edition, Pearson Mayank Dave, Computer Networks, Second edition, Cengage Learning
4. David E. Culler, Jaswinder Pal Singh, Anoop Gupta: Parallel Computer Architecture, A Hardware / Software Approach, Morgan Kaufman, 1999.

[Mrs. Beena G Pillai]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Cover Page: Course Overview
Semester: V Semester- B SEC **Year: 2017-18**

Course : **Database Management System**	Course Code: **15CS53**
Total contact Hours: **51**	Duration of Exam: **03 Hrs.**
Total exam marks: **80**	Total I.A. marks: **20**
Lesson plan author: **Mr. Mallesh HL**	Date: **05/08/2017**
Checked by: **Prof. C V Shanmukaswamy**	Date: **05/08/2017**

COURSE OBJECTIVES:
The students will learn to
- Understand terms related to database design and management
- Understand the objectives of data and information management
- Understand the database development process
- Understand the relational model and relational database management system
- Assess data and information requirements
- Construct conceptual data models
- Evaluate the normality of a logical data model, and correct any anomalies
- Develop physical data models for relational database management systems
- Implement relational databases using a RDBMS
- Retrieve data using SQL
- Understand database performance issues
- Understand the basics of data management and administration
- Work as a valuable member of a database design and implementation team.

COURSE OUTCOME:
The student should be able to
- Understand terms related to database design and management
- Understand the objectives of data and information management
- Understand the database development process
- Understand the relational model and relational database management system
- Assess data and information requirements
- Construct conceptual data models
- Evaluate the normality of a logical data model, and correct any anomalies
- Develop physical data models for relational database management systems
- Implement relational databases using a RDBMS
- Retrieve data using SQL
- Understand database performance issues
- Understand the basics of data management and administration
- Work as a valuable member of a database design and implementation team.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

Name of the Staff: Mr. Mallesh HL Course Code: 15CS53

Class: V SEM CSE, "B" Section Course: Database Management System

Sl. No.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		Module - 1		
01	07/8/17	**Introduction to Databases:** Introduction, Characteristics of database approach,		
02	08/8/17	Advantages of using the DBMS approach, History of database applications		
03	09/8/17	**Overview of Database Languages and Architectures:** Data Models, Schemas, and Instances.		
04	12/8/17	Three schema architecture and data independence, database languages, and interfaces, The Database System environment.		
05	14/8/17	**Conceptual Data Modelling using Entities and Relationships:** Entity types, Entity sets,		
06	16/8/17	attributes, roles, and structural constraints, Weak entity types,		
07	19/8/17	ER diagrams, examples, Specialization and Generalization		
		Module – 2		
08	21/8/17	**Relational Model**: Relational Model Concepts, Relational Model Constraints and relational database schemas,		
09	22/8/17	Update operations, transactions, and dealing with constraint violations.		
10	23/8/17	**Relational Algebra:** Unary and Binary relational operations, additional relational operations (aggregate, grouping, etc.)		
11	26/8/17	Examples of Queries in relational algebra.		
12	28/8/17	**Mapping Conceptual Design into a Logical Design:** Relational Database Design using ER-to-Relational mapping.		
13	29/8/17	**SQL:** SQL data definition and data types, specifying constraints in SQL,		
14	30/8/17	Retrieval queries in SQL, INSERT, DELETE, and UPDATE statements in SQL		
15	03/9/17	Additional features of SQL.		**Extra Class**
16	04/9/17	Revision		
17	05/9/17	Question Paper Discussion		
		Module – 3		
18	06/9/17	**SQL : Advances Queries:** More complex SQL retrieval queries,		
19	09/9/17	Specifying constraints as assertions and action triggers,		
20	11/9/17	Views in SQL, Schema change statements in SQL.		
21	12/9/17	**Database Application Development:** Accessing databases from applications,		
22	13/9/17	An introduction to JDBC, JDBC classes and interfaces		
23	23/9/17	SQLJ, Stored procedures		
24	25/9/17	Case study: The internet Bookshop		

25	26/9/17	**Internet Applications:** The three-Tier application architecture,		
26	27/9/17	The presentation layer, The Middle Tier		
27	03/10/17	Revision		
28	04/10/17	Question Paper Discussion		

Module – 4

29	07/10/17	**Normalization: Database Design Theory** – Introduction to Normalization using Functional and Multivalued Dependencies:		
30	09/10/17	Informal design guidelines for relation schema, Functional Dependencies,		
31	10/10/17	Normal Forms based on Primary Keys, Second and Third Normal Forms,		
32	11/10/17	Boyce-Codd Normal Form,		
33	14/10/17	Multivalued Dependency and Fourth Normal Form,		
34	16/10/17	Join Dependencies and Fifth Normal Form.		
35	17/10/17	**Normalization Algorithms:** Inference Rules, Equivalence, and Minimal Cover,		
36	21/10/17	Properties of Relational Decompositions, Algorithms for Relational Database Schema Design,		
37	23/10/17	Nulls, Dangling tuples, and alternate Relational Designs,		
38	24/10/17	Further discussion of Multivalued dependencies and 4NF,		
39	25/10/17	Other dependencies and Normal Forms		

Module – 5

40	31/10/17	**Transaction Processing:** Introduction to Transaction Processing, Transaction and System concepts,		
41	04/11/17	Desirable properties of Transactions, Characterizing schedules based on recoverability,		
42	07/11/17	Characterizing schedules based on Serializability, Transaction support in SQL.		
43	08/11/17	**Concurrency Control in Databases:** Two-phase locking techniques for Concurrency control,		
44	11/11/17	Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques,		
45	13/11/17	Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking.		
46	14/11/17	**Introduction to Database Recovery Protocols:** Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update,		
47	15/11/17	Recovery techniques based on immediate update, Shadow paging,		
48	20/11/17	Database backup and recovery from catastrophic failures		
49	21/11/17	Revision		
50	22/11/17	Question Paper Discussion		
51	25/11/17	Question Paper Discussion		

TEXT BOOKS:

1. **Database systems Models, Languages, Design and Application Programming,** RamezElmasri and Shamkant B. Navathe, 7th Edition, 2017, Pearson.
2. **Database management systems,** Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.
2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design,Implementation and Management, Cengage Learning 2012.

Mr. Mallesh H.L	**Prof. C V Shanmukaswamy**	**Dr. H.B. Phani Raju**
Staff In-charge	HOD, Dept of CSE	Principal

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TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Cover Page: **Course Overview**
Semester: V Semester-B section **Year: 2017-18**

Course Title: **AUTOMATA THEORY AND COMPUTABILITY**	*Course Code:* **15CS54**
Total contact Hours: **53**	*Duration of Exam*: **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Ms. Swetha K.H**	*Date:*05/**08/2017**
Checked by: **Prof. C.V Shanmukaswamy**	*Date:*09/**08/2017**

Objectives:

This course will enable students to:

- Introduce core concepts in Automata and Theory of Computation.
- Identify different Formal language Classes and their Relationships.
- Design Grammars and Recognizers for different formal languages.
- Prove or disprove theorems in automata theory using their properties.
- Determine the decidability and intractability of Computational problems.

Outcomes:

The student should be able to:

- Acquire fundamental understanding of the core concepts in automata theory and Theory of Computation
- Learn how to translate between different models of Computation (e.g.,Deterministic and Non-deterministic and Software models).
- Design Grammars and Automata (recognizers) for different language classes and become knowledgeable about restricted models of Computation (Regular, Context Free) and their relative powers.
- Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.
- Classify a problem with respect to different models of Computation.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Staff: Ms. Swetha K.H **Class: V Sem 'B' Sec**

Course: ~~Formal Languages And~~ Automata Theory & computability **Sub. Code: 15CS54**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	08/08/17	**MODULE-1: 10 Hours** **Why study the Theory of Computation, Languages and Strings**: Strings, Languages.		
02	10/08/17	A Language Hierarchy, Computation,		
03	11/08/17	**Finite State Machines (FSM)**: Deterministic FSM,		
04	12/08/17	Regular languages,		
05	17/08/17	Designing FSM, Nondeterministic FSMs,		
06	17/08/17	From FSMs to Operational Systems, Simulators for FSMs,		**Extra Class**
07	18/08/17	Minimizing FSMs,		
08	19/08/17	Canonical form of Regular languages,		
09	22/08/17	Finite State Transducers,		
10	24/08/17	Bidirectional Transducers.		
11	25/08/17	**MODULE – 2 10 Hours** Regular Expressions (RE): what is a RE?, Kleene's theorem,		Extra class
12	26/08/17	Applications of REs, Manipulating and Simplifying REs.		
13	29/08/17	Manipulating and Simplifying REs.		
14	31/08/17	Regular Grammars: Definition, Regular Grammars		
15	01/09/17	Regular Grammars		
16	05/09/17	and Regular languages.		
17	07/09/17	Regular Languages (RL) and Nonregular Languages: How many RLs,		
18	07/09/17	To show that a language is regular,		**Extra Class**
19	08/09/17	Closure properties of RLs,		
20	09/09/17	to show some languages are not RLs.		
21	12/09/17	**MODULE – 3 10 Hours** Context-Free Grammars(CFG): Introduction to Rewrite Systems and Grammars,		
22	14/09/17	CFGs and languages, designing CFGs,		
23	15/09/17	simplifying CFGs, proving that a Grammar is correct,		
24	21/09/17	Derivation and Parse trees,		**Extra Class**
25	21/09/17	Ambiguity, Normal Forms.		
26	22/09/17	Pushdown Automata (PDA): Definition of non-deterministic PDA, Deterministic and		
27	23/09/17	Non-deterministic PDAs,		
28	26/09/17	Non-determinism and Halting,		
29	28/09/17	Alternative equivalent definitions of a PDA,		

30	03/10/17	alternatives that are not equivalent to PDA.		
31	06/10/17	**Module – 4 10 Hours** Context-Free and Non-Context-Free Languages: Where do the Context-Free Languages(CFL) fit,		
32	07/10/17	Showing a language is context-free,		
33	10/10/17	Pumping theorem for CFL,		
34	12/10/17	Important closure properties of CFLs,		**Extra Class**
35	12/10/17	Deterministic CFLs.		
36	13/10/17	Algorithms and Decision Procedures for CFLs: Decidable questions, Un-decidable questions.		
37	14/10/17	Turing Machine: Turing machine model,		
38	17/10/17	Representation, Language acceptability by TM,		
39	19/10/17	design of TM,		
40	21/10/17	Techniques for TM construction.		
41	24/10/17	**MODULE – 5 10 Hours** Variants of Turing Machines (TM),		
42	26/10/17	The model of Linear Bounded automata:		**Extra Class**
43	26/10/17	Decidability: Definition of an algorithm,decidability,		
44	31/10/17	decidable languages,		
45	02/11/17	Undecidable languages,		
46	03/11/17	halting problem of TM, Post correspondence problem.		
47	04/11/17	Complexity: Growth rate of functions,		
48	07/11/17	the classes of P and NP,		
49	09/11/17	Quantum Computation: quantum computers,		
50	10/11/17	Church-Turing thesis.		
51	11/11/17	Discussion of previous year question papers		
52	14/11/17	Discussion of previous year question papers		
53	25/11/17	Discussion of previous year question papers		

Text Books:

1. Elaine Rich, Automata, Computability and Complexity, 1st Edition, Pearson Education,2012/2013
2. K L P Mishra, N Chandrasekaran , 3rd Edition, Theory of Computer Science, PhI, 2012.

Textbook 1: Ch 1,2, 3,4, 5.1 to 5.10 Textbook 1: Ch 6, 7, 8: 6.1 to 6.4, 7.1, 7.2, 8.1 to 8.4
extbook 1: Ch 11, 12: 11.1 to 11.8, 12.1, 12.2, 12,4, 12.5, 12.6 Textbook 1: Ch 13: 13.1 to 13.5, Ch 14: 14.1, 14.2,
Textbook 2: Ch 9.1 to 9.6 Textbook 2: Ch 9.7 to 9.8, 10.1 to 10.7, 12.1, 12.2, 12.8, 12.8.1, 12.8.2

Reference Books:

1. John E Hopcroft, Rajeev Motwani, Jeffery D Ullman, Introduction to AutomataTheory, Languages, and Computation, 3rd Edition, Pearson Education, 2013
2. Michael Sipser : Introduction to the Theory of Computation, 3rd edition, Cengage learning,2013
3. John C Martin, Introduction to Languages and The Theory of Computation, 3rd Edition, Tata McGraw –Hill Publishing Company Limited, 2013
4. Peter Linz, "An Introduction to Formal Languages and Automata", 3rd Edition, Narosa Publishers, 1998
5. Basavaraj S. Anami, Karibasappa K G, Formal Languages and Automata theory, Wiley India, 2012
6. C K Nagpal, Formal Languages and Automata Theory, Oxford University press, 2012.

[Ms. Swetha K.H]
Staff Icharge

[Prof. C.V Shanmukaswamy]
HOD, CSE

[Dr. H.B Phaniraju]
Principal

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SHRIDEVI EDUCATION

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

***Cover Page*: Subject Overview**
***Semester: V Semester*- 'B' SEC** **Year:2017-18**

Subject Title: **OBJECT-ORIENTED MODELING AND DESIGN**	*Subject Code:* 15CS551
Total contact Hours: 50	*Duration of Exam*: 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Kiran G M	*Date:05/08/2017*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 07/08/2017

***Prerequisites*:** None

Objectives:
The students will learn

- Demonstrate concept of use-case model, sequence model and state chart model for a given problem.
- Explain the facets of the unified process approach to design and build a Software system.
- Translate the requirements into implementation for Object Oriented design.
- Choose an appropriate design pattern to facilitate development procedure.

Outcomes:

The student should be

- Describe the concepts of object-oriented and basic class modelling.
- Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.
- Choose and apply a befitting design pattern for the given problem.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2017-18 (odd Sem)

COURSE PLAN

Staff : Mr. Kiran G M
Subject : Object Oriented Modeling And Design

Class :V-"B"
Sub.Code : 15CS551

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
1	07/08/17	**PART-A** **Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development?		
2	09/08/17	OO Themes; Evidence for usefulness of OO development;		
3	11/08/17	OO modelling history. Modelling as Design technique: Modelling; abstraction;		
4	14/08/17	The Three models. Class Modelling: Object and Class Concept;		
5	16/08/17	Link and associations concepts; Generalization and Inheritance;		
6	17/08/17	A sample class model; Navigation of class models; Advanced Class Modelling,		
7	18/08/17	Advanced object and class concepts; Association ends;		
8	21/08/17	N-ary associations; Aggregation; Abstract classes;		
9	23/08/17	Multiple inheritance; Metadata; Reification; Constraints;		
10	24/08/17	Derived Data; Packages. Question papers solvation		
11	28/08/17	**Module – 2:** UseCase Modelling and Detailed Requirements		
12	30/08/17	Overview; Detailed objectoriented Requirements definitions		
13	31/08/17	System Processes-A use case/Scenario view		
14	01/09/17	Identifying Input and outputs-The System sequence diagram		
15	04/09/17	Identifying Input and outputs-The System sequence diagram cont…		
16	06/09/17	Identifying Object Behaviour-		
17	07/09/17	Identifying Object Behaviour cont…		
18	13/09/17	The state chart Diagram		
19	14/09/17	Integrated Object-oriented Models.		
20	15/09/17	Question papers solvation		
21	21/09/17	**Module – 3:** Process Overview		
22	22/09/17	System Conception and Domain Analysis		
23	25/09/17	Process Overview: Development stages;		
24	27/09/17	Development life Cycle		
25	28/09/17	System Conception: Devising a system concept;		
26	04/10/17	Elaborating a concept; preparing a problem statement		
27	05/10/17	Domain Analysis: Overview of analysis		
28	06/10/17	Domain Class model: Domain state model		
29	09/10/17	Domain interaction model Iterating the analysis		
30	11/10/17	Question papers solvation		

31	12/10/17	**Module – 4:** Use case Realization :The Design Discipline within up iterations:		
32	13/10/17	Object Oriented Design-The Bridge between Requirements and Implementation		
33	16/10/17	Object Oriented Design-The Bridge between Requirements and Implementation cont....		
34	19/10/17	Design Classes and Design within Class Diagrams;		
35	23/10/17	Interaction Diagrams-Realizing Use Case and defining methods;		
36	25/10/17	Designing with Communication Diagrams		
37	26/10/17	Updating the Design Class Diagram;		
38	02/11/17	Package Diagrams-Structuring the Major Components;		
39	03/11/17	Implementation Issues for Three-Layer Design.		
40	06/11/17	Question papers solvation		
41	08/11/17	**Module – 5:** Design Patterns: Introduction; what is a design pattern?,		
42	09/11/17	Describing design patterns,		
43	10/11/17	the catalogue of design patterns,		
44	13/11/17	Organizing the catalogue, How design patterns solve design problems,		
45	15/11/17	how to select a design patterns		
46	20/11/17	how to use a design pattern;		
47	22/11/17	Creational patterns: prototype and singleton (only);		
48	23/11/17	Creational patterns: prototype and singleton (only); cont...		
49	23/11/17	Structural patterns adaptor and proxy (only)		Extra
50	24/01/17	Question papers solvation		

TEXT BOOKS:

1. Michael Blaha, James Rumbaugh: Object Oriented Modelling and Design with UML,2nd Edition, Pearson Education,2005
2. Satzinger, Jackson and Burd: Object-Oriented Analysis & Design with the Unified Process, Cengage Learning, 2005.
3. Erich Gamma, Richard Helm, Ralph Johnson and john Vlissides: Design Patterns – Elements of Reusable Object-Oriented Software, Pearson Education,2007.

REFERENCE BOOKS:

1. Grady Booch et. al.: Object-Oriented Analysis and Design with Applications,3rd Edition,Pearson Education,2007.
2. Frank Buschmann, ReginеMeunier, Hans Rohnert, Peter Sommerlad, Michel Stal: Pattern –Oriented Software Architecture. A system of patterns , Volume 1, John Wiley and Sons.2007.
3. Booch, Jacobson, Rambaugh : Object-Oriented Analysis and Design with Applications, 3rd edition, pearson, Reprint 2013

[Kiran G M]
Staff Incharge

[Prof. C V Shanmukaswamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

***Cover Page*: Course Overview**
Semester: V Semester, A & B sec **Year: 2017-18**

Course Title: Cloud Computing	**Course Code:** 15CS565
Total contact Hours: 51	**Duration of Exam:** 03 Hrs.
Total exam marks: 80	**Total I.A. marks:** 20
Course plan author: Mr. Basavesha D	**Date:** 07/08/2017
Checked by: Prof. C.V.Shanmuka Swamy	**Date:** 07/08/2017

Prerequisites: Computer Networks basics.

Course objectives: This course will enable students to

- Explain the technology and principles involved in building a cloud environment.
- Contrast various programming models used in cloud computing
- Choose appropriate cloud model for a given application

Course outcomes: The students should be able to:

- Explain the concepts and terminologies of cloud computing
- Demonstrate cloud frameworks and technologies
- Define data intensive computing
- Demonstrate cloud applications

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Name of the Course Instructor: Mr. Basavesha D

Course Code: 15CS565

Course: Cloud Computing

Class: VSEM, A & B Section

Sl. No	Date	Topic	Topics Covered	Remarks
1	07/08/17	**MODULE 1:** Introduction ,Cloud Computing at a Glance, The Vision of Cloud Computing,		
2	08/08/17	Defining a Cloud, A Closer Look, Cloud Computing Reference Model, Characteristics and Benefits,		
3	10/08/17	Challenges Ahead, Historical Developments, Distributed Systems,		
4	12/08/17	Virtualization, Web 2.0, Service-Oriented Computing, Utility-Oriented Computing,		
5	14/08/17	Building Cloud Computing Environments, Application Development,		
6	17/08/17	Infrastructure and System Development, Computing Platforms and Technologies,		
7	19/08/17	Amazon Web Services (AWS), Google AppEngine, Microsoft Azure, Hadoop, Force.com Salesforce.com,		
8	21/08/17	Manjrasoft Aneka Virtualization, Introduction, Characteristics of Virtualized,		
9	22/08/17	Environments Taxonomy of Virtualization Techniques, Execution Virtualization,		
10	24/08/17	Other Types of Virtualization,		
11	26/08/17	**MODULE 2:** Cloud Computing Architecture, Introduction, Cloud Reference Model, Architecture,		
12	28/08/17	Infrastructure / Hardware as a Service, Platform as a Service, Software as a Service,		
13	29/08/17	Types of Clouds, Public Clouds, Private Clouds, Hybrid Clouds, Community Clouds,		
14	31/08/17	Economics of the Cloud, Open Challenges,		
15	04/09/17	Cloud Definition, Cloud Interoperability and Standards Scalability and Fault Tolerance Security,		
16	05/09/17	Trust, and Privacy Organizational Aspects Aneka: Cloud Application Platform, Framework Overview,		
17	07/09/17	Anatomy of the Aneka Container, From the Ground Up: Platform Abstraction Layer, Fabric Services,		
18	09/09/17	foundation Services, Application Services, Building Aneka Clouds, Infrastructure Organization,		
19	11/09/17	Logical Organization, Private Cloud Deployment Mode, Public Cloud Deployment Mode,		
20	12/09/17	Hybrid Cloud Deployment Mode, Cloud Programming and Management, Aneka SDK, Management Tools		
21	14/09/17	**MODULE 3:** Concurrent Computing: Thread Programming, Introducing Parallelism for Single Machine Computation,		
22	21/09/17	Programming Applications with Threads, What is a		

		Thread?, Thread APIs,		
23	23/09/17	Techniques for Parallel Computation with Threads, Multithreading with Aneka,		
24	25/09/17	Introducing the Thread Programming Model, Aneka Thread vs. Common Threads,		
25	26/09/17	Programming Applications with Aneka Threads, Aneka Threads Application Model,		
26	28/09/17	Domain Decomposition: Matrix Multiplication, Functional Decomposition: Sine, Cosine, and Tangent.		
27	03/10/17	High-Throughput Computing: Task Programming, Task Computing, Characterizing a Task, Computing Categories, Frameworks for Task Computing,		
28	07/10/17	Task-based Application Models, Embarrassingly Parallel Applications, Parameter Sweep Applications,		
29	09/10/17	MPI Applications, Workflow Applications with Task Dependencies, Aneka Task-Based Programming,		
30	10/10/17	Task Programming Model, Developing Applications with the Task Model, Developing Parameter Sweep Application, Managing Workflows.		
31	12/10/17	**MODULE 4:** Data Intensive Computing:		
32	14/10/17	Map-Reduce Programming,		
33	16/10/17	What is Data-Intensive Computing?,		
34	17/10/17	Characterizing Data-Intensive Computations,		
35	19/10/17	Challenges Ahead, Historical Perspective,		
36	21/10/17	Technologies for Data-Intensive Computing,		
37	23/10/17	Storage Systems, Programming Platforms,		
38	24/10/17	Aneka MapReduce Programming,		
39	26/10/17	Introducing the MapReduce Programming Model,		
40	31/10/17	Example Application		
41	02/11/17	**MODULE 5:** Cloud Platforms in Industry, Amazon Web Services, Compute Services,		
42	04/11/17	Storage Services, Communication Services,		
43	07/11/17	Additional Services, Google AppEngine,		
44	09/11/17	Architecture and Core Concepts, Application Life-Cycle,		
45	11/11/17	Cost Model, Observations, Microsoft Azure,		
46	13/11/17	Azure Core Concepts, SQL Azure,		
47	14/11/17	Windows Azure Platform Appliance.		
48	20/11/17	Cloud Applications Scientific Applications,		
49	21/11/17	Healthcare: ECG Analysis in the Cloud, , Social Networking,		
50	23/11/17	Media Applications, Multiplayer Online Gaming.		
51	25/11/17	Question paper discussion		

Text Books:

1. Rajkumar Buyya, Christian Vecchiola, and Thamarai Selvi Mastering Cloud. Computing McGraw Hill.

[Mr. Basavesha.D]
Staff Incharge

[Prof. C.V.Shanmuka Swamy]
Head, Dept of CSE

[Dr H.B. Phani Raju]
Principal

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SHRIDEVI

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester: VII Semester **Year:2017-18**

Subject Title: **OBJECT-ORIENTED MODELING AND DESIGN**	*Subject Code:* 10CS71
Total contact Hours: 55	*Duration of Exam*: 03 Hrs.
Total exam marks: 100	*Total I.A. marks:* 25
Lesson plan author: Ms.Prathibha T.S	*Date:05/08/2017*
Checked by: Prof. C V Shanmukaswamy	*Date:* 05/08/2017

Prerequisites: None
Objectives:
The students will learn

I. To develop skills that enable to construct software of high quality that is reliable easy to understand, modify and maintain.
II. To understand why these skills are important.
III. The ability to understand difference between different software processes
IV. The ability to understand different system models.
V. Ability to understand managing the people involved in projects
VI. Development of complete system

Outcomes:
The student should be

I. Able to develop skills that enable to construct software of high quality-software that is reliable easy to understand, modify and maintain.
II. Able to understand why these skills are important.
III. Able to understand difference between different software processes
IV. Able to understand different system models.
V. Able to understand managing the people involved in projects.
VI. Able to construct any mdel given to them.

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2017-18 (odd Sem)
COURSE PLAN

Staff : Ms.Prathibha T.S

Subject: Object Oriented Modeling And Design

Class :VII

Sub.Code : 10CS71

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
1	08/08/2017	**PART-A** **UNIT-1:Introduction, Modeling Concepts, class Modeling:** What is Object Orientation? What is OO development? OO themes		
2	09/08/2017	Evidence for usefulness of OO development, OO modeling history.		
3	10/08/2017	Modeling as Design Technique: Modeling, abstraction, The three models.		
4	12/08/2017	Class Modeling:Object&Class concepts,Link&Associationsconcepts		
5	16/08/2017	Generalization and inheritance, A sample class model		
6	17/08/2017	Navigation of class models, Practical tips.		
7	19/08/2017	Practical tips Contd....		
8	22/08/2017	**UNIT–2:Advanced Class Modeling, State Modeling:** Advanced object and class concepts, Association ends.		
9	23/08/2017	N-ary associations,Aggregation;AbstractClasses,		
10	24/08/2017	Multiple inheritance, Metadata, Reification, Constraints,		
11	26/08/2017	Derived data, Packages, Practical tips.		
12	29/08/2017	State Modeling: Events, States, Transitions and Conditions,		
13	30/08/2017	State diagrams, State diagram behavior, Practical tips.		
14	31/08/2017	**UNIT–3:Advanced State Modeling, Interaction Modeling:** Advanced State Modeling: Nested state diagrams,		
15	05/09/2017	Nested states, Signal generalization. Concurrency,		
16	06/09/2017	A sample state model, Relation of class, state models, Practical tips.		
17	07/09/2017	Interaction Modeling: Use case models, Sequence models,		
18	09/09/2017	Activity models. Use case relationships,		
19	12/09/2017	Procedural sequence models;		
20	13/09/2017	Special constructs for activity models.		
21	14/09/2017	**UNIT-4 :Process Overview, System Conception, Domain** Process Overview:Development stages,		
22	21/09/2017	Development life cycle,System Conception:Devising a system concept,		
23	23/09/2017	Elaborating a concept, Preparing a problem statement. Domain Analysis : : Overview of analysis,		
24	26/09/2017	Domain class model		
25	27/09/2017	Domain state model		
26	28/09/2017	Domain interaction model,		
27	03/10/2017	Iterating the analysis.		
28	04/10/2017	**PART – B** **UNIT–5:Application Analysis, System Design:** Application Analysis: Application interaction model,		
29	05/10/2017	Application class model,		
30	07/10/2017	Application state model,		E
31	10/10/2017	Adding operations. Overview of system design, Estimating performance,		
32	11/10/2017	Making a reuse plan, Breaking a system in to sub-systems, Identifying concurrency, Allocation of sub-systems		
33	12/10/2017	Management of data storage, Handling global resources,		
34	14/10/2017	Allocation of sub-systems, Management of data storage,		
35	17/10/2017	Handling global resources, Setting the trade-off priorities,		

36	19/10/2017	Common architectural styles, Architecture of the ATM system as the example.		
37	21/10/2017	**UNIT–6 : Class Design, Implementation Modeling, Legacy Systems:** Class Design: Overview of class design, Bridging the gap, Realizing use cases,		
38	24/10/2017	Designing algorithms, Recursing downwards, Refactoring; Design optimization,		
39	25/10/2017	Reification of behavior, Adjustment of inheritance,		
40	26/10/2017	Organizing a class design, ATM example. Implementation Modeling: Overview of implementation,		
41	31/10/2017	Implementation Modeling: Overview of implementation, Fine-tuning classes, Fine-tuning generalizations,		
42	01/11/2017	Realizing associations, Testing. Legacy Systems: Reverse engineering, Building the class models,		E
43	02/11/2017	Building the interaction model, Building the state model,		
44	04/11/2017	Reverse engineering tips, Wrapping, Maintenance.		
45	07/11/2017	**UNIT–7** **Design Patterns – 1:** What is a pattern and what makes a pattern?		
46	08/11/2017	Pattern categories,		
47	09/11/2017	Relationships between patterns;		
48	11/11/2017	Pattern description Communication Patterns: Forwarder-Receiver,Client-Dispatcher-Server,Publisher-Subscriber.		
49	14/11/2017	**UNIT-8.Design Patterns-2,** Idioms: Management atterns:Command		
50	15/11/2017	View handler.		
51	21/11/2017	Idioms and style,		E
52	22/11/2017	Where to find idioms.		E
53	23/11/2017	Counted pointer example		E
54	25/11/2017	Idioms:introduction : what can idioms provide?		
55	25/11/2017	Discussion of Question Paper and Rivision		Extra class

TEXT BOOKS:

1. Michael Blaha, James Rumbaugh: Object-Oriented Modeling and Design with UML, 2nd Edition, Pearson Education, 2005.
(Chapters 1 to 17, 23)
2. Frank Buschmann, Regine Meunier, Hans Rohnert, Peter Sommerlad, Michael Stal: Pattern-Oriented Software Architecture, A System of Patterns, Volume 1, John Wiley and Sons, 2007.
(Chapters 1, 3.5, 3.6, 4)

REFERENCE BOOKS:

1. Grady Booch et al: Object-Oriented Analysis and Design with Applications, 3rd Edition, Pearson Education, 2007.
2. Brahma Dathan, Sarnath Ramnath: Object-Oriented Analysis, Design, and Implementation, Universities Press, 2009.
3. Hans-Erik Eriksson, Magnus Penker, Brian Lyons, David Fado: UML 2 Toolkit, Wiley-Dreamtech India, 2004.
4. Simon Bennett, Steve McRobb and Ray Farmer: Object-Oriented Systems Analysis and Design Using UML, 2nd Edition, Tata McGraw-Hill, 2002.

(Ms.Prathibha T.S)	(Prof. C V Shanmukaswamy)	(Dr.H.B Phani Raju)
Staff Incharge	HOD, CSE	Principal

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SUBJECT PLAN

***Cover Page*: Subject Overview**

Semester: VII Semester **Year: 2017-18**

Subject Title: Embedded Computing Systems	*Subject Code:*10CS72
Total contact Hours: 55	*Duration of Exam*: 03 Hrs.
Total exam marks: 100	*Total I.A. marks:* 25
Lesson plan author: Ms. Meghana D K	*Date: 05/08/2017*
Checked by: Prof C.V. ShanmukaSwamy	*Date:05/08/2017*

***Prerequisites*:** None

Objectives:

The students will learn

1.) The concepts and essence of Embedded Systems which are useful in studying and developing PCB's and embedded software programming the controller boards.

2.) To understand the concepts of computer hardware's and writes the Embedded C code for various Microcontrollers and Also ARM programming.

3.) To study the concept of RTOS Design techniques various buses for communication I2C Bus, CAN Bus. The Microcontroller development cycle by using IDE's and Target Hardware Debugging tools.

4.) To promote the interest of the students to communicate the concepts both in writing and orally.

Outcomes:

The student should be

1.) Able to the use the concepts and notations from discrete mathematics which are useful in studying and describing object of computer algorithms and programming languages.

2.) Able to use the concepts and notations from discrete mathematics which are useful in solving problems in computer algorithms and programming languages.

3.) Able to use mathematical structures in various applications such as cryptography, automated theorem proving and software development.

4.) Able to communicate the concepts of Digital Electronics in both writing and orally.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LECTURE PLAN

Name of the Staff: Ms. Meghana D K
Subject: Embedded computing Systems

Sub Code: 10CS72
Class: VIISEM, CSE

Sl. No.	Date	TOPIC	TOPICS COVERED	Remarks
01	07/08/17	**UNIT 1:**Embedded Computing: Introduction		
02	09/08/17	Complex Systems		
03	10/08/17	Microprocessors		
04	12/08/17	Embedded Systems Design Process		
05	14/08/17	Formalism for System design		
06	16/08/17	Design Example: Model Train Controller.		
07	17/08/17	**UNIT 2:**Instruction Sets, CPUs		
08	19/08/17	Preliminaries		
09	21/08/17	ARM Processor		
10	23/08/18	Programming Input and Output		
11	24/08/17	Supervisor mode		
12	26/08/17	Exceptions, Traps		
13	28/08/17	Coprocessors, Memory Systems Mechanisms		
14	30/08/17	CPU Performance, CPU Power Consumption		
15	31/08/17	Design Example: Data Compressor		
16	04/09/17	**UNIT 3:** Bus-Based Computer Systems		
17	06/09/17	CPU Bus		
18	07/09/17	Memory Devices		
19	09/09/17	I/O devices		
20	11/09/17	Component Interfacing		
21	13/09/17	Designing with Microprocessor		
22	14/09/17	Development and Debugging		
23	21/09/17	System-Level Performance Analysis		
24	23/09/17	Design Example: Alarm Clock		
25	23/09/17	**Unit 5:** Real Time Operating System (RTOS) Based Design		Extra
26	25/09/17	Basics of OS		
27	27/09/17	Kernel		
28	28/09/17	Types of OSs		
29	04/10/17	Tasks, processes, Threads		
30	07/10/17	Multitasking, Multiprocessing, Context switching		
31	09/10/17	Scheduling Policies		

32	11/10/17	Task Communication, Task Synchronization		
33	12/10/17	**UNIT 6:** RTOS-Based Design - 2: Inter process Communication mechanisms		
34	14/10/17	Evaluating OS performance		
35	16/10/17	Choice of RTOS, Power Optimization		
36	21/10/17	Design Example: Telephone Answering machine		Extra
37	21/10/17	**UNIT 7:**Distributed Embedded Systems: Distributed Network Architectures		
38	23/10/17	Networks for Embedded Systems: I2C Bus		
39	25/10/17	CAN Bus		
40	26/10/17	SHARC Link Ports		
41	02/11/17	Ethernet, Myrinet, Internet		
42	04/11/17	Network Based Design. Design Example: Elevator Controller		Extra
43	04/11/17	**UNIT 8:** Embedded Systems Development Environment: The Integrated Development Environment		
44	08/11/17	Types of File generated on Cross Compilation		
45	09/11/17	Dis-assembler /Decompiler, Simulators		
46	11/11/17	Emulators, and Debugging		Extra
47	11/11/17	Target Hardware Debugging		
48	13/11/17	**UNIT 4:** Program Design and Analysis: Components for embedded programs		
49	15/11/17	Models of programs, Assembly, Linking and Loading, Basic Compilation Techniques		
50	20/11/17	Program optimization, Program-Level performance analysis		
51	22/11/17	Software performance optimization		
52	23/11/17	Program-Level energy and power analysis		
53	23/11/17	Analysis and optimization of program size		Extra
54	25/11/17	Program validation and testing, Design Example: Software modem		
55	25/11/17	Revision, Question paper discussion		Extra

Text Books

1. Wayne Wolf: Computers as Components, Principles of Embedded Computing Systems Design, 2nd Edition, Elsevier, 2008.
2. Shibu K V: Introduction to Embedded Systems, Tata Hill-2009.

Reference Books:

1. James K. Peckol: Embedded Systems, A contemporary Design Tool, Wiley Student Edition, 2008.
2. Tammy Neorgaard: Embedded Systems Architecture, Elsevier, 2005.

Meghana.D.K.
[Ms.Meghana D K] Staff Incharge

[Prof C.V.Shanmukaswamy] Head, Dept of CSE

[DR. H.B. Phani Raju] Principal

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Shridevi Institute of Engineering and Technology, Tumkur.
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

***Cover Page*: Course Overview**
Semester: VII Semester **Year: 2017-18**

CourseTitle: **Programming the Web**	*Course Code:* **10CS73**
Total contact Hours: 55	*Duration of Exam:* 03 Hrs.
Total exam marks: 100	*Total I.A. marks:* 25
Lesson plan author: Mr. Renukaradhya P C	*Date:* 05/08/2017
Checked by: Prof C V Shanmukaswamy	*Date:* 05/08/2017

***Prerequisites*:** None.

Objectives:

- To understand the technology and protocols underlying the World Wide Web(WWW)
- To become familiar with common tools and techniques for developing Web-based applications, both client-side and server-side.
- To develop a working knowledge of HTML,XHTML,JavaScript,Java,Perl and PHP as languages for developing Web applications
- To know the use of Cascading Style sheet in creating document server-Browser communications.
- To understand XML concepts, CGI concepts, and Perl.

Outcomes:

Students who have successfully completed this course will

- Demonstrate an understanding of the concepts, terms and technology behind the WWW.
- Write simple HTML programs using <tags>
- Write various Scripting Languages.
- Write CGI concepts to provide server-browser communication.
- Capable to design web pages using HTML, XHTML, XML.

Shridevi Institute of Engineering and Tech: ology, Tumkur-06
Academic Year 2017-18 (Odd Sem)
DEPARTMENT OF COMPUTER SCIEN: & ENGG.

COURSE PLAN

Staff: Renukaradhya P C
Course: Programming the Web

Class: VII SEM
Course Code: 10CS73

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
		UNIT-1 FUNDAMENTALS OF WEB, XHTML		
1	07-08-17	Internet, WWW, Web Browsers and Web Servers		
2	09-08-17	URL's, MIME, HTTP		
3	10-08-17	Security, The Web Programmers Toolbox		
4	11-08-17	XHTML: Basic Syntax,		
5	14-08-17	Standard structure, Basic text markup,		
6	16-08-17	Images, Hypertext Links.		
		UNIT-2 XHTML , CSS		
7	17-08-17	XHTML (continued): Lists, Tables, Forms, Frames		
8	18-08-17	CSS: Introduction, Levels of style sheets		
9	21-08-17	Style specification formats,		
10	23-08-17	Selector forms, Property value forms, Font properties,		
11	26-08-17	List properties, Color,		
12	28-08-17	Alignment of text, The box model, Background images,		
13	30-08-17	The and tags, Conflict resolution.		
		UNIT-3 Javascript:		
14	31-08-17	Overview of Javascript, Object orientation and Javascript,		
15	01-09-17	Syntactic characteristics, Primitives, operations,		
17	04-09-17	and expressions, Screen output		
17	06-09-17	and keyboard input, Control statements,		
18	07-09-17	Object creation and modification, Arrays,		
19	08-09-17	Functions, Constructors, Pattern matching using regular expressions, Errors in scripts, Examples.		
		UNIT-4 Javascript and HTML Documents, Dynamic Documents with Javascript:		
20	11-09-17	The Javascript execution environment,		
21	13-09-17	The Document Object Model, Element access in Javascript,		
22	14-09-17	Events and event handling, Handling events from		

		the Body elements,		
23	15-09-17	Button elements, Text box and Password elements, The DOM 2 event model,		
24	21-09-17	The navigator object, DOM tree traversal and modification. Introduction to dynamic documents, Positioning elements,		
25	22-09-17	Moving elements, Element visibility, Changing colors and fonts,		
26	25-09-17	Dynamic content, Stacking elements, Locating the mouse cursor,		
27	27-09-17	Reacting to a mouse click, Slow movement of elements,		
28	28-09-17	Dragging and dropping elements.		
		PART-B		
		UNIT-5 XML		
29	29-09-17	Introduction, Syntax, Document structure		
30	04-10-17	Document type definitions		
31	06-10-17	Namespaces, XML schemas, Displaying raw XML documents		
32	09-10-17	Displaying XML documents with CSS,		
33	11-10-17	XSLT style sheets,		
34	12-10-17	XML processors, Web services.		
		UNIT-6 Perl, CGI Programming:		
35	13-10-17	Origins and uses of Perl, Scalars and their operations,		
36	16-10-17	Assignment statements and simple input and output,		
37	19-10-17	Control statements, Fundamentals of arrays, Hashes,		
38	23-10-17	References, Functions, Pattern matching, File input and output; Examples.		
39	25-10-17	The Common Gateway Interface; CGI linkage; Query string format;		
40	26-10-17	CGI.pm module; A survey example;		
41	26-10-17	Cookies. Database access with Perl and MySQL		Extra
		UNIT-7 PHP		
42	27-10-17	Origins and uses of PHP, Overview of PHP,		
43	27-10-17	General syntactic characteristics,		Extra
44	02-11-17	Primitives, operations and expressions, Output, Control statements		
45	03-11-17	Arrays, Functions, Pattern matching, Form handling		
46	08-11-17	Files, Cookies,		
47	09-11-17	Session tracking		
48	10-11-17	Database access with PHP and MySQL.		

49	13-11-17	Origins and uses of Ruby,		
50	15-11-17	Scalar types and their operations,		
51	20-11-17	Simple input and output		
52	22-11-17	Control statements,		
53	22-11-17	Arrays, Hashes, Methods, Classes,		
54	23-11-17	Code blocks and iterators,		
55	24-11-17	Pattern matching, Overview of Rails, Document requests,		
55	08-11-17	Processing forms, Rails applications with Databases, Layouts.		

TEXT BOOK:

1. Robert W. Sebesta: Programming the World Wide Web, 4th Edition, Pearson Education, 2008.

(Listed topics only from Chapters 1 to 9, 17 to 15)

Reference Books:

1. M. Deitel, P.J. Deitel, A. B. Goldberg: Internet & World Wide Web How to Program, 4th Edition, Pearson Education, 2004.
2. Chris Bates: Web Programming Building Internet Applications, 3rd Edition, Wiley India, 2007.
3. Xue Bai et al: The web Warrior Guide to Web Programming, Cengage Learning, 2003

Staff Incharge
[Mr. Renukaradhya P C]

Head, Dept of CSE
[Prof C V Shanmukaswamy]

Principal
[Dr. H B Phani Raju]

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Sri Shridevi Charitable Trust (R)
SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
Sira Road, Tumkur – 572 106. Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/ WEF: 07/08/2017

Academic Year 2017-18 (ODD Sem)

LECTURE PLAN

Cover Page: **Course Overview**
Semester: VII Semester **Year: 2017-2018**

Course Title: **Advanced computer Architectures**	*Course Code:* **10CS74**
Total contact Hours: **52**	*Duration of Exam*: **03 Hrs.**
Total exam marks: **100**	*Total I.A. marks:* **25**
Lesson plan author: **Mrs. Beena G Pillai**	*Date:* **07/08/2017**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **07/08/2017**

Objectives:

This course :

- Provides an exposure to current and emerging trends in Computer Architectures.
- The emphasis is on studying and analyzing fundamental issues in architecture design and their impact on performance.
- Focuses on advanced computer architectures and low-level system software such as pipelined and Multiprocessor systems.

Outcomes:

The student should be able to:

- Understand the advanced concepts of computer architecture.
- Investigating modern design structures of Pipelined and Multiprocessors systems.
- Become acquainted with recent computer architectures and I/O devices, as well as the low-level language required to drive/manage these types of advanced hardware.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/ WEF: 07/08/2017

Staff: Mrs. Beena G Pillai **Class: VII Sem**
Course Name : Advanced Computer Architectures **Course Code: 10CS74**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
PART A UNIT – 1 Fundamentals Of Computer Design				
01	07/08/2017	Introduction; Classes of computers;		
02	08/08/2017	Defining computer architecture;		
03	10/08/2017	Trends in Technology,		
04	12/08/2017	power in Integrated Circuits and cost;		
05	14/08/2017	Dependability;		
06	17/08/2017	Measuring, reporting and summarizing Performance;		
07	19/08/2017	Quantitative Principles of computer design.		
UNIT – 2 : Pipelining				
08	21/08/2017	Introduction;		
09	22/08/2017	Pipeline hazards;		
10	24/08/2017	Continued..		
11	26/08/2017	Implementation of pipeline;		
12	26/08/2017	Continued..		**Extra Class: Time: 12: 30am - 1:30pm**
13	28/08/2017	What makes pipelining hard to implement?		
14	29/08/2017	Continued..		
UNIT – 3 : Instruction –Level Parallelism – 1				
15	31/08/2017	ILP: Concepts and challenges;		
16	01/09/2017	Basic Compiler Techniques for exposing ILP;		
17	04/09/2017	Reducing Branch costs with prediction;		
18	05/09/2017	Continued..		
19	07/09/2017	Overcoming Data hazards with Dynamic scheduling;		
20	09/09/2017	Continued..		
21	11/09/2017	Hardware based speculation.		
UNIT – 4 : Instruction –Level Parallelism – 2				
22	12/09/2017	Exploiting ILP using multiple issue and static scheduling;		
23	14/09/2017	Continued..		
24	21/09/2017	Exploiting ILP using dynamic scheduling,		
25	23/09/2017	multiple issue and speculation;		
26	23/09/2017	Advanced Techniques for instruction delivery and Speculation;		**Extra Class: Time: 12: 30am - 1:30pm**
27	25/09/2017	Continued..		
28	26/09/2017	The Intel Pentium 4 as example.		

PART – B UNIT – 5 : Multiprocessors and Thread –Level Parallelism				
29.	28/09/2017	Introduction;		
30	03/10/2017	Symmetric shared-memory architectures;		
31	07/10/2017	Performance of symmetric shared–memory multiprocessors;		
32	09/10/2017	Distributed shared memory and directory-based coherence;		
33	10/10/2017	Basics of synchronization;		
34	12/10/2017	Models of Memory Consistency		
UNIT – 6 : Review of Memory Hierarchy				
35	14/10/2017	Introduction;		
36	14/10/2017	Cache performance; Cache Optimizations,		**Extra Class: Time: 12: 30am - 1:30pm**
37	16/10/2017	Continued..		
38	17/10/2017	Virtual memory		
39	21/10/2017	Continued..		
UNIT – 7 : Memory Hierarchy design:				
40	23/10/2017	Introduction;		
41	24/10/2017	Advanced optimizations of Cache performance;		
42	26/10/2017	Continued..		
43	26/10/2017	Memory technology and optimizations;		**Extra Class: Time: 12: 30am - 1:30pm**
44	31/10/2017	Protection: Virtual memory and virtual machines.		
UNIT – 8 : Hardware and Software for VLIW and EPIC				
45	02/11/2017	Introduction: Exploiting Instruction-Level Parallelism Statically;		
46	04/11/2017	Detecting and Enhancing Loop-Level Parallelism;		
47	07/11/2017	Scheduling and Structuring Code for Parallelism;		
48	09/11/2017	Hardware Support for Exposing Parallelism: Predicated Instructions;		
49	11/11/2017	Hardware Support for Compiler Speculation;		
50	13/11/2017	The Intel IA-64 Architecture and		**Extra Class: Time: 12: 30am - 1:30pm**
51	14/11/2017	Itanium Processor; Conclusions.		
52	25/11/2017	Previous Question Paper Discussion		

Text Books:

1. John L. Hennessey and David A. Patterson: Computer Architecture, A Quantitative Approach, 4th Edition, Elsevier, 2007. (Chapter. 1.1 to 1.9, 2.1 to 2.10, 4.1to 4.6, 5.1 to 5.4, Appendix A, Appendix C, Appendix G)

Reference Books:

1. Kai Hwang: Advanced Computer Architecture Parallelism, Scalability, Programability, 2nd Edition, Tata Mc Graw Hill, 2010.
2. David E. Culler, Jaswinder Pal Singh, Anoop Gupta: Parallel Computer Architecture, A Hardware / Software Approach, Morgan Kaufman, 1999.

[Mrs. Beena G Pillai]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester: VII Semester **Year: 2017-18**

Course Title: **Java and J2EE**	Course Code: **10CS753**
Total contact Hours: **55**	Duration of Exam: **03 Hrs.**
Total exam marks: **100**	Total I.A. marks: **25**
Course plan author: **Mr. Basavesha D**	Date: **05/08/2017**
Checked by: **Prof. C.V.Shanmuka Swamy**	Date: **05/08/2017**

PRE-REQUISITES:
The course assumes knowledge of Object Oriented Concepts and programming in any Object Oriented language

COURSE OBJECTIVES:
The students will learn

1. To implement Object Oriented Programming Concepts.
2. To use and create packages and interfaces in a Java program.
3. To use graphical user interface in Java programs.
4. To create Applets.
5. To implement exception handling in Java.
6. To implement Multithreading.
7. To use Input/Output Streams.
8. To handle security implementations in Java.
9. To use the servlets and the servlet connections.
10. To learn and use JDBC and ODBC.

COURSE OUTCOMES:
The student should be

1. Able to implement Object Oriented Programming Concepts.
2. Able to use and create packages and interfaces in a Java program.
3. Able to use graphical user interface in Java programs.
4. Able to create Applets.
5. Able to implement exception handling in Java.
6. Able to implement Multithreading.
7. Able to use Input/Output Streams.
8. Able to handle security implementations in Java.
9. Able to use the servlets and the servlet connections.
10. Able to learn and use JDBC and ODBC.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Name of the Course Instructor: Mr. Basavesha D

Course Code: 10CS753

Class: VIISEM, CSE

Course: Java and J2EE

Sl. No.	DATE	TOPIC	TOPICS COVERED	REMARKS
01	07/08/2017	**UNIT 1: INTRODUCTION TO JAVA**: Java and Java applications; Java Development Kit (JDK).		
02	08/08/2017	Java is interpreted, Byte Code, JVM; Object-oriented programming; Simple Java programs.		
03	09/08/2017	Data types and other tokens: Boolean variables, int, long, char, operators, arrays, white spaces, literals, assigning values		
04	11/08/2017	Creating and destroying objects; Access specifiers. Operators and Expressions: Arithmetic Operators, Bitwise operators, Relational operators		
05	14/08/2017	The Assignment Operator, The? Operator; Operator Precedence; Logical expression; Type casting; Strings.		
06	16/08/2017	Control Statements: Selection statements, iteration statements, Jump Statements.		
07	17/08/2017	**UNIT 2: CLASSES, INHERITANCE, EXCEPTIONS, APPLETS:** Classes: Classes in Java; Declaring a class; Class name; Super classes; Constructors;		EXTRA
08	18/08/2017	Creating instances of class; Inner classes. Inheritance: Simple, multiple, and multilevel inheritance;		
09	21/08/2017	Overriding, overloading. Exception handling: Exception handling in Java.		
10	22/08/2017	The Applet Class: Two types of Applets; Applet basics; Applet Architecture; An Applet skeleton;		
11	23/08/2017	Simple Applet display methods; Requesting repainting; Using the Status Window; The HTML APPLET tag;		
12	28/08/2017	Passing parameters to Applets; getDocumentbase() and getCodebase(); ApletContext and showDocument(); The AudioClip Interface; The AppletStub Interface; Output to the Console.		
13	29/08/2017	**UNIT 3: MULTI THREADED PROGRAMMING, EVENT HANDLING:** Multi Threaded Programming: What are threads?		
14	30/08/2017	How to make the classes threadable; Extending threads; Implementing runnable;		
15	01/09/2017	Synchronization; Changing state of the thread;		
16	04/09/2017	Bounded buffer problems, read-write problem, producer-		

		What are threads?		
14	30/08/2017	How to make the classes threadable; Extending threads; Implementing runnable;		
15	01/09/2017	Synchronization; Changing state of the thread;		
16	04/09/2017	Bounded buffer problems, read-write problem, producer-consumer problems.		
17	05/09/2017	Event Handling: Two event handling mechanisms; The delegation event model;		
18	06/09/2017	Event classes; Sources of events; Event listener interfaces;		
19	08/09/2017	Using the delegation event model; Adapter classes; Inner classes.		
20	11/09/2017	**UNIT 4: SWINGS:** Swings: The origins of Swing;		
21	12/09/2017	Two key Swing features;		EXTRA
22	13/09/2017	The Swing Packages; Components and Containers;		
23	15/09/2017	A simple Swing Application;		
24	21/09/2017	Create a Swing Applet; Jlabel and ImageIcon;		
25	22/09/2017	JTextField;The Swing Buttons;		
27	25/09/2017	JTabbedpane; JScrollPane; JList; JComboBox; JTable		
28	26/09/2017	**UNIT 5: JAVA 2 ENTERPRISE EDITION OVERVIEW, DATABASE ACCESS:** Overview of J2EE and J2SE.		
29	27/09/2017	The Concept of JDBC; JDBC Driver Types		
30	03/10/2017	JDBC Packages; A Brief Overview of the JDBC process;		
31	04/10/2017	Database Connection; Associating the JDBC/ODBC Bridge with the Database;		
32	06/10/2017	Statement Objects; ResultSet; Transaction Processing;		
33	09/10/2017	Metadata, Data types; Exceptions.		
34	10/10/2017	**UNIT 6: SERVLETS:** Background; The Life Cycle of a Servlet;.		
35	11/10/2017	Using Tomcat for Servlet Development;		
36	12/10/2017	A simple Servlet; The Servlet API;		EXTRA
37	13/10/2017	The Javax.servlet Package; Reading Servlet Parameter;		
38	16/10/2017	The Javax.servlet.http package;		

39	17/10/2017	**Handling HTTP Requests and Responses,** Using Cookies;		
40	23/10/2017	Session Tracking.		
41	24/10/2017	**UNIT 7: JSP, RMI:** Java Server Pages (JSP): JSP, JSP Tags		
42	25/10/2017	Tomcat, Request String,		
43	31/10/2017	User Sessions, Cookies, Session Objects.		
44	03/11/2017	Java Remote Method Invocation: Remote Method Invocation concept;		
45	07/11/2017	Java Remote Method Invocation: Server side,		
46	08/11/2017	Java Remote Method Invocation: Client side		
47	09/11/2017	**UNIT 8: ENTERPRISE JAVA BEANS:** Enterprise java Beans;		EXTRA
48	10/11/2017	Deployment Descriptors;.		
49	13/11/2017	Session Java Bean,		
50	14/11/2017	Entity Java Bean;		
51	15/11/2017	Message-Driven Bean;		
52	20/11/2017	The JAR File		E
53	21/11/2017	Question paper discussion		E
54	22/11/2017	Question paper discussion		E
55	24/11/2017	Revision		E

TEXT BOOKS:

1. **Java - The Complete Reference** – Herbert Schildt, 7th Edition, Tata McGraw Hill, 2007.
2. **J2EE - The Complete Reference** – Jim Keogh, Tata McGraw Hill, 2007.

REFERENCE BOOKS:

1.Introduction to JAVA Programming – Y.Daniel Liang, 6th Edition, Pearson Education,2007.

2. The J2EE Tutorial – Stephanie Bodoff et al, 2nd Edition, Pearson Education, 2004.

[Mr.Basavesha D]
Staff Incharge

[Prof.C.V.Shanmuka Swamy]
Head, Dept of CSE

[Dr.H B Phani Raju]
Principal

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Shridevi Institute of Engineering and Technology,
Sira Road, Tumkur-572106, Karnataka
Academic Year 2017-18 (Odd Sem)
Department of Computer Science & Engg.

COURSE PLAN

Name of the Staff: Mr. Mallesh H.L
Course: C# Programming and .Net

Course Code: 10CS761
Class: VII Semester

Course Title: **C# Programming and .Net**	*Subject Code:* **10CS761**
Total contact Hours: **61**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **100**	*Total I.A. marks:* **25**
Course plan author: **Mr. Mallesh H.L**	*Date:* **05/08/2017**
Checked by: **Prof. C V Shanmukaswamy**	*Date:* **05/08/2017**

OBJECTIVES

The students will learn

- To develop skills and learn high level programming to develop efficient software.
- To understand why these skills are important.
- The ability to understand difference between different assemblies.
- The ability to understand different C# Class.
- Ability to understand and know requirement to design projects.

Outcomes:

The student should be

- To develop skills and learn high level programming to develop efficient software.
- Able to understand why these skills are important.
- Able to understand difference between different assemblies
- Able to understand different C# Class.
- Able to understand and know requirement to design projects.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Name of the Staff: Mr. Mallesh H.L **Course Code: 10CS761**

Course: C# Programming and .NET **Class: VII Semester**

Sl. No.	DATE	TOPICS PLANNED	Topics Covered	Remarks
PART – A		UNIT - 1 THE PHILOSOPHY OF .NET:		
01	08/08/17	Understanding the Previous State of Affairs, THE PHILOSOPHY OF .NET: Understanding the Previous State of Affairs, The .NET Solution, The Building Block of the .NET Platform (CLR,CTS, and CLS),		
02	10/08/17	The .NET Solution, The Building Block of the .NET Platform (CLR,CTS, and CLS),		
03	11/08/17	The Role of the .NET Base Class Libraries, What C# Brings to the Table, An Overview of .NET Binaries (aka Assemblies),		
04	11/08/17	An Overview of .NET Binaries (aka Assemblies), the Role of the Common Intermediate Language, The Role of .NET Type Metadata,		
05	12/08/17	The Role of the Assembly Manifest, Compiling CIL to Platform –Specific Instructions, Understanding the Common Type System, Intrinsic CTS Data Types, Understanding the Common Languages Specification,		
06	17/08/17	Intrinsic CTS Data Types, Understanding the Common Languages Specification, Deploying the .NET Runtime.		
07	18/08/17	Understanding the Common Language Runtime A tour of the .NET Namespace		
		UNIT - 2 BUILDING C# APPLICATIONS:		
08	18/08/17	The Role of the Command Line Complier (csc.exe),		
09	19/08/17	Building C # Application using csc.exe Working with csc.exe Response Files, Generating Bug Reports , Remaining C# Compiler Options,		
10	22/08/17	The Command Line Debugger (cordbg.exe) Using the, Visual Studio .NET IDE, Other Key Aspects of the VS.NET IDE,		
11	24/08/17	C# "Preprocessor:" Directives, An Interesting Aside: The System. Environment Class.		
		UNIT - 3 C# LANGUAGE FUNDAMENTALS:		
12	26/08/17	The Anatomy of a Basic C# Class, Creating objects: Constructor Basics,		
13	29/08/17	The Composition of a C# Application, Default Assignment and Variable Scope, The C# Member Initialization Syntax		
14	31/08/17	Basic Input and Output with the Console Class, Understanding Value Types and Reference Types,		
15	01/09/17	The Master Node: System, Object, The System Data Types (and C# Aliases), Converting Between Value Types and Reference Types:		
16	01/09/17	Boxing and Unboxing, Defining Program Constants,		
17	05/09/17	C# Iteration Constructs,		
18	07/09/17	C# Controls Flow Constructs		
19	08/09/17	The Complete Set of C# Operators, Defining Custom Class Methods,		
20	08/09/17	Understating Static Methods, Methods Parameter Modifies, Array Manipulation in C #,		
21	09/09/17	String Manipulation in C#, C# Enumerations, Defining Structures in C#,		
22	12/09/17	Defining Custom Namespaces.		

UNIT - 4 OBJECT- ORIENTED PROGRAMMING WITH C#:				
23	14/09/17	Forms Defining of the C# Class, Definition the "Default Public Interface" of a Type,		
24	15/09/17	Recapping the Pillars of OOP, The First Pillars: C#'s Encapsulation Services,		
25	15/09/17	Pseudo- Encapsulation: Creating Read-Only Fields, The Second Pillar: C#'s Inheritance Supports,		
26	21/09/17	keeping Family Secrets: The "Protected" Keyword, Nested Type Definitions,		
27	22/09/17	The Third Pillar: C #'s Polymorphic Support, Casting Between.		
PART – B UNIT - 5 EXCEPTIONS AND OBJECT LIFETIME:				
28	22/09/17	Ode to Errors, Bugs, and Exceptions, The Role of .NET Exception Handing,		
29	23/09/17	the System. Exception Base Class, Throwing a Generic Exception, Catching Exception, CLR System – Level Exception (System. System Exception),		
30	26/09/17	Custom Application-Level Exception (System. System Exception), Handling Multiple Exception,		
31	28/09/17	The Family Block, the Last Chance Exception Dynamically Identifying Application – and System Level Exception Debugging		
32	03/10/17	System Exception Using VS. NET, Understanding Object Lifetime, the CIT of 'new', The Basics of Garbage Collection,,		
33	06/10/17	Finalization a Type, The Finalization Process, Building an Ad Hoc Destruction Method,		
34	06/10/17	Garbage Collection Optimizations, The System. GC Type.		
UNIT - 6 INTERFACES AND COLLECTIONS:				
35	07/10/17	Defining Interfaces Using C# Invoking Interface Members at the object Level,		
36	10/10/17	Exercising the Shapes Hierarchy, Understanding Explicit Interface Implementation, Interfaces As Polymorphic Agents,		
37	12/10/17	, Building Interface Hierarchies, Implementing, Implementation, Interfaces Using VS .NET, understanding the IConvertible Interface,		
38	13/10/17	Building a Custom Enumerator (IEnumerable and Enumerator), Building Cloneable objects (ICloneable),		
39	13/10/17	Building Comparable Objects (I Comparable), Exploring the system. Collections Namespace		
40	14/10/17	Building a Custom Container (Retrofitting the Cars Type).		
UNIT - 7 Callback Interfaces, Delegates, and Events, Advanced Techniques:				
41	17/10/17	Understanding the .NET Delegate Type,		
42	19/10/17	Members of System. Multicast Delegate		
43	21/10/17	The Simplest Possible Delegate Example, Building More a Elaborate Delegate Example,		
44	24/10/17	Understanding Asynchronous Delegates, Understanding (and Using) Events.		
45	26/10/17	The Advances Keywords of C#, A Catalog of C# Keywords Building a Custom Indexer, A Variation of the Cars Indexer Internal Representation of Type Indexer.		
46	31/10/17	Using C# Indexer from VB .NET. Overloading operators, The Internal Representation of Overloading Operators, interacting with Overload Operator from Overloaded- Operator- Challenged Languages,		
47	02/10/17	Creating Custom Conversion Routines, Defining Implicit Conversion Routines,		
48	03/11/17	The Internal Representations of Customs Conversion Routines		
UNIT - 8 UNDERSTANDING .NET ASSEMBLES				
49	03/11/17	Problems with Classic COM Binaries, An Overview of .NET Assembly,		
50	04/11/17	Building a Simple File Test Assembly, A C#. Client Application, A Visual Basic .NET Client Application,		
51	07/11/17	Building a Simple File Test Assembly, A C#. Client Application,		

52	09/11/17	A Visual Basic.NET Client Application, Cross Language Inheritance,, Exploring the CarLibrary's, Manifest, Exploring the CarLibrary's Types, Building the Multifile Assembly ,Using Assembly, Understanding Private Assemblies,		
53	10/11/17	Probing for Private Assemblies (The Basics), Private A Assemblies XML Configurations Files,		
54	10/11/17	Building a Shared Assembly, Understanding Delay Signing, Installing/Removing Shared Assembly, Using a Shared Assembly		
55	11/11/17	Revision		
56	14/11/17	Previous Year Question Paper Discussion		
57	21/11/17	Previous Year Question Paper Discussion		E
58	23/11/17	Previous Year Question Paper Discussion		E
59	24/11/17	Previous Year Question Paper Discussion		E
60	24/11/17	Previous Year Question Paper Discussion		E
61	25/11/17	Previous Year Question Paper Discussion		

TEXT BOOKS:

1. **Pro C# with .NET 3.0** – Andrew Troelsen, Special Edition, Dream tech Press, India, 2007.
2. **Programming in C#** – E. Balagurusamy, 5th Reprint, Tata McGraw Hill, 2004. (For Programming Examples)

REFERENCE BOOKS:

1. **Inside C#** – Tom Archer, WP Publishers, 2001.
2. **C#: The Complete Reference** – Herbert Schildt, Tata McGraw Hill, 2004.

Mr. Mallesh H.L
Staff In-charge

Prof. C V Shanmukaswamy
HOD, Dept of CSE

Dr. H.B Phani Raju
Principal

PRINCIPAL
SIET., TUMAKURU

SIET / CSE / 2017 - 2018/ WEE-

Academic Year 2017-18 (EVEN Sem)

LECTURE PLAN

Cover Page: **Course Overview**
Semester: VI Semester A Section

Year: 2017-2018

Course Title: **Cryptography, Network Security And Cyber Law**	*Course Code:* **15CS61**
Total contact Hours: **50**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Mr. Kiran G M**	*Date:* **01/02/2018**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **01/02/2018**

Objectives:

This course :

- Provides an exposure to current and emerging trends in Computer Architectures.
- The emphasis is on studying and analyzing fundamental issues in architecture design and their impact on performance.
- Focuses on advanced computer architectures and low-level system software such as pipelined and Multiprocessor systems.

Outcomes:

The student should be able to:

- Understand the advanced concepts of computer architecture.
- Investigating modern design structures of Pipelined and Multiprocessors systems.
- Become acquainted with recent computer architectures and I/O devices, as well as the low-level language required to drive/manage these types of advanced hardware.

SIET / CSE / 2017 - 2018/ WEF: 01/02/2018

Staff: Mr. Kiran G M **Class: VI Sem A Section**
Course Name: Cryptography, Network Security And Cyber Law **Course Code: 15CS61**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
Module – 1 : Introduction – Cyber Attacks				
1	01/02/18	Cyber Attacks		
2	02/02/18	Defence Strategies and Techniques		
3	02/02/18	Guiding Principles		
4	06/02/18	Mathematical Background for Cryptography - Modulo Arithmetic's		
5	07/02/18	The Greatest Comma Divisor		
6	08/02/18	Useful Algebraic Structures, Chinese Remainder Theorem		
7	09/02/18	Basics of Cryptography - Preliminaries		
8	09/02/18	Elementary Substitution Ciphers		
9	14/02/18	Elementary Transport Ciphers		
10	15/02/18	Other Cipher Properties		
11	16/02/18	Secret Key Cryptography – Product Ciphers,		
12	16/02/18	DES Construction		
13	20/02/18	Revision		
14	21/02/18	Revision		
Module -2 : Public Key Cryptography & RSA				
15	22/02/18	Public Key Cryptography and RSA – RSA Operations		
16	23/02/18	Why Does RSA Work?, Performance, Applications, Practical Issues		
17	23/02/18	Continue.		
18	27/02/18	Cryptographic Hash - Introduction		
19	28/02/18	Properties		
20	01/03/ 18	Construction, Applications and Performance		
21	02/03/ 18	The Birthday Attack		
22	02/03/ 18	Discrete Logarithm and its Applications – Introduction		
23	06/03/ 18	Diffie-Hellman Key Exchange		
24	07/03/ 18	Other Applications.		
25	08/03/ 18	Revision		
26	13/03/ 18	Revision		
Module -3 : Key Management				
27	14/03/ 18	Key Management – Introduction		
28	15/03/ 18	Digital Certificates		

29	16/03/ 18	Public Key Infrastructure		
30	16/03/ 18	Identity–based Encryption		
31	20/03/ 18	Identity–based Encryption		
32	21/03/ 18	Authentication–I - One way Authentication		
33	23/03/ 18	Mutual Authentication, Dictionary Attacks,		
34	23/03/ 18	Authentication – II – Centalised Authentication		
35	27/03/ 18	The Needham-Schroeder Protocol, Kerberos, Biometrics		
36	28/03/ 18	IPSec- Security at the Network Layer – Security at Different layers: Pros and Cons		
37	03/04/ 18	IPSec in Action		
38	04/04/ 18	Internet Key Exchange (IKE) Protocol, Security Policy and IPSEC		
39	05/04/ 18	Virtual Private Networks		
40	06/04/ 18	Security at the Transport Layer - Introduction, SSL Handshake Protocol		
41	06/04/ 18	SSL Record Layer Protocol, OpenSSL		
42	10/04/ 18	Revision		
43	11/04/ 18	Revision		
Module -4 : IEEE 802.11 Wireless LAN Security				
44	19/04/ 18	IEEE 802.11 Wireless LAN Security – Background		
45	20/04/ 18	Authentication, Confidentiality and Integrity, Viruses, Worms, and Other Malware		
46	20/04/ 18	Firewalls – Basics, Practical Issues		
47	24/04/ 18	Intrusion Prevention and Detection - Introduction, Prevention Versus Detection		
48	25/04/ 18	Types of Instruction Detection Systems		
49	25/04/ 18	DDoS Attacks Prevention/Detection		
50	26/05/ 18	Web Service Security – Motivation, Technologies for Web Services		
51	02/05/ 18	WS- Security, SAML, Other Standards.		
52	03/05/ 18	Revision		
Module -5 : IT act aim and Objectives				
53	04/05/ 18	IT act aim and objectives, Scope of the act, Major Concepts		
54	04/05/ 18	Important provisions, Attribution, acknowledgement, and dispatch of electronic records		
55	08/05/ 18	Secure electronic records and secure digital signatures		
56	09/05/ 18	Regulation of certifying authorities: Appointment of Controller and Other officers		
57	10/05/ 18	Digital Signature certificates		
58	11/05/ 18	Duties of Subscribers, Penalties and adjudication		
59	11/05/ 18	The cyber regulations appellate tribunal, Offences		
60	17/05/ 18	Network service providers not to be liable in certain cases		
61	18/05/ 18	Miscellaneous Provisions.		
62	18/05/ 18	Question paper discussion		
63	22/05/ 18	Revision		

Text Books:

1. Cryptography, Network Security and Cyber Laws – Bernard Menezes, Cengage Learning, 2010 edition (Chapters-1,3,4,5,6,7,8,9,10,11,12,13,14,15,19(19.1- 19.5),21(21.1-21.2),22(22.1-22.4),25

Reference Books:

1. Cryptography and Network Security- Behrouz A Forouzan, Debdeep Mukhopadhyay, Mc-GrawHill, 3rd Edition, 2015.
2. Cryptography and Network Security- William Stallings, Pearson Education, 7th Edition.
3. Cyber Law simplified- Vivek Sood, Mc-GrawHill, 11th reprint , 2013.
4. Cyber security and Cyber Laws, Alfred Basta, Nadine Basta, Mary brown, ravindra kumar, Cengage learning

[Mr. Kiran G M]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

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Shridevi Institute of Engineering and Technology, Tumkur
(An ISO 9001-2008 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE LECTURE PLAN

Semester: VI 'A' SEC **Year: 2017-2018**

Subject Title: COMPUTER GRAPHICS AND VISUALIZATION	Subject Code: **15CS62**
Total contact Hours: 69	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 20
Lesson plan author: Mr Renukaradhya P C	Date: 31/01/2018
Checked by: Prof. C V Shanmuka Swamy	Date: 31/01/2018

OBJECTIVES

- Explain hardware, software and OpenGL Graphics Primitives.
- Illustrate interactive computer graphic using the OpenGL.
- Design and implementation of algorithms for 2D graphics Primitives and attributes.
- Demonstrate Geometric transformations, viewing on both 2D and 3D objects.
- Infer the representation of curves, surfaces, Color and Illumination models

OUTCOMES

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate Geometric transformations on both 2D and 3D objects.
- Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

SL No	DATE	TOPIC NAMES	TOPICS COVERED	REMARKS
1	1/2/2018	**Module-1: Overview: Computer Graphics and OpenGL:** Computer Graphics: Basics of computer graphics		
2	3/2/2018	Application of Computer Graphics		
3	5/2/2018	Video Display Devices: Random Scan and Raster Scan displays		
4	6/2/2018	color CRT monitors, Flat panel displays.		
5	7/2/2018	Raster-scan systems: video controller, raster scan Display processor, Graphics workstations and viewing systems		
6	8/2/2018	Input devices, graphics networks, graphics on the internet, graphics software.		
7	10/2/2018	OpenGL: Introduction to OpenGL ,coordinate reference frames,		
8	12/2/2018	Specifying two-dimensional world coordinate reference frames in OpenGL,		
9	14/2/2018	OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes		
10	15/2/2018	OpenGL point attribute functions, OpenGL line attribute functions		
11	17/2/2018	Line drawing algorithms(DDA, Bresenham's)		
12	19/2/2018	circle generation algorithms (Bresenham's).		
13	20/2/2018	**Module – 2: Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas		
14	21/2/2018	OpenGL polygon fill area functions, fill area attributes.		
15	22/2/2018	General scan line polygon fill algorithm		
16	24/2/2018	OpenGL fill-area attribute functions.		
17	26/2/2018	2DGeometric Transformations: Basic 2D Geometric Transformations		
18	27/2/2018	Matrix representations and homogeneous coordinates.		
19	28/2/2018	Inverse transformations,		
20	1/3/2018	2D Composite transformations, Other 2D transformations		
21	3/3/2018	Raster methods for geometric transformations		
22	5/3/2018	OpenGL raster transformations, OpenGL geometric transformations function		
23	6/3/2018	2D viewing: 2D viewing pipeline,		
24	7/3/2018	OpenGL 2D viewing functions.		

	w3/2018	**Module – 3: Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping: clipping window		
26	13/3/2018	normalization and viewport transformations		
27	14/3/2018	clipping algorithms,2D point clipping		
28	15/3/2018	2D line clipping algorithms: cohen-sutherland line clipping		
29	17/3/2018	only -polygon fill area clipping: Sutherland-Hodgeman polygon clipping algorithm only		
30	19/3/2018	3DGeometric Transformations: 3D translation, rotation, scaling		
31	20/3/2018	composite 3D transformations, other 3D transformations		
32	21/3/2018	Affine transformations		
33	22/3/2018	OpenGL geometric transformations functions		
34	24/3/2018	Color Models: Properties of light, color models, RGB and CMY color models.		
35	26/3/2018	Illumination Models: Light sources, basic illumination models-Ambient light		
36	27/3/2018	diffuse reflection, specular and phong 10 Hours model, Corresponding openGL functions.		
37	28/3/2018	**Module – 4: 3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts		
38	31/3/2018	3D viewing pipeline,		
39	2/4/2018	3D viewing coordinate parameters		
40	3/4/2018	Transformation from world to viewing coordinates,		
41	4/4/2018	Projection transformation		
42	5/4/2018	orthogonal projections, perspective projections		
43	7/4/2018	The viewport transformation and 3D screen coordinates.		
44	9/4/2018	OpenGL 3D viewing functions.		
45	10/4/2018	Visible Surface Detection Methods: Classification of visible surface Detection algorithms		
46	11/4/2018	Back face detection		
47	12/4/2018	Depth buffer method		
48	19/4/2018	OpenGL visibility detection functions.		
49	21/4/2018	**Module – 5 Input& interaction, Curves and Computer Animation:** Input and Interaction: Input devices		
50	23/4/2018	Clients and servers, Display Lists		
51	24/4/2018	Display Lists and Modelling		
52	25/4/2018	Programming Event Driven Input, Menus Picking		
53	26/4/2018	Building Interactive Models		
54	30/4/2018	Animating Interactive programs		
55	2/5/3018	Design of Interactive programs,		
56	3/5/2018	Logic operations.		
57	5/5/2018	Curved surfaces,		
58	7/5/2018	quadric surfaces		
59	8/5/2018	OpenGL Quadric-Surface and Cubic-Surface Functions		
60	9/5/2018	Bezier Spline Curves,		

	10/5/2018	Bezier surfaces		
62	12/5/2018	OpenGL curve functions		
63	17/5/2018	Corresponding openGL functions.		
64	19/5/2018	Question paper Discussion		
65	21/5/2018	Question paper Discussion		
66	22/5/2018	Question paper Discussion		
67	23/5/2018	Question paper Discussion		
68	24/5/2018	Question paper Discussion		
69	26/5/2018	Question paper Discussion		

Text Books:

1. Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd / 4th Edition, Pearson Education,2011

2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL, 5th edition. Pearson Education, 2008

Reference Books:

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Huges Computer graphics with OpenGL: pearson education

2. Xiang, Plastock : Computer Graphics , sham's outline series, 2nd edition, TMG.

3. Kelvin Sung, Peter Shirley, steven Baer : Interactive Computer Graphics, concepts and applications, Cengage Learning

4. M M Raiker, Computer Graphics using OpenGL, Filip learning/Elsevier

Mr. Renukaradhya P C	Prof. C V Shanmuka Swamy	Dr. H.B Phani Raju
Staff-Incharge	Head, Dept of CSE	Principal

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COURSE PLAN

***Cover Page*: Course Overview**
***Semester:* VI Semester- A Section** **Year: 2017-2018**

CourseTitle: SYSTEM SOFTWARE & COMPILER DESIGN	*Subject Code:* **15CS63**
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Course plan author: Mr. Raghu Nandan R	*Date:* 29/01/2018
Checked by: Prof.C.V.shanmukaswamy	*Date:* 31/01/2018

PREREQUISITES: Knowledge of DFA, NFA and the system software compiler.

OBJECTIVES

The study of this course will teach the student to

- Learn how a compiler works and know about the powerful compiler generation tools, which are useful to the other non-compiler applications.
- Learn how to write programs that execute faster using parse trees.
- Describe the design of a compiler including its phases and components and acquire information about scanner, parser, code generator, and optimizer.
- Identify the similarities and differences among various parsing techniques and grammar transformation techniques.
- Describe the role of the compiler in ensuring the security, privacy and integrity of data.

OUTCOMES

Upon completion of this course will student will be

- Able to explain how a compiler works and know about the powerful compiler generation tools, which are useful to the other non-compiler applications.
- Able to explain how to write programs that execute faster using parse trees.
- Able to describe the design of a compiler including its phases and components and acquire information about scanner, parser, code generator, and optimizer.
- Able to identify the similarities and differences among various parsing techniques and grammar transformation techniques.
- Able to describe the role of the compiler in ensuring the security, privacy and integrity of data.

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		MODULE-1		
01	01/02/18	Introduction to System Software,		
02	01/02/18	Machine Architecture of SIC and SIC/XE.		
03	03/02/18	**Assemblers:** Basic assembler functions,		
04	05/02/18	machine dependent assembler features,		
05	07/02/18	machine independent assembler features,		
06	08/02/18	assembler design options.		
07	08/02/18	**Macroprocessors:** Basic macro processor functions,		
08	10/02/18	machine independent macro processor features,		
09	12/02/18	Macro processor design options,		
10	14/02/18	implementation examples		
		MODULE-2		
11	15/02/18	**Loaders and Linkers:** Basic Loader Functions,		
12	15/02/18	Machine Dependent Loader Features,		
13	17/02/18	Machine Independent Loader Features,		
14	19/02/18	Loader Design Options,.		
15	21/02/18	Implementation Examples		
16	22/02/18	**System File and Library Structure**: Introduction,		
17	22/02/18	Library And File Organization,		
18	24/02/18	Design Of A Record Source Program File Structure,		
19	26/02/18	Object Code, Object File,		
20	28/02/18	Object File Structure,		
21	01/03/18	Executable File, Executable File Structure,		
22	01/03/18	Libraries, Image File Structure.		
		MODULE-3		
23	03/03/18	**Lexical Analysis**: Introduction,		
24	05/03/18	Alphabets and Tokens In Computer Languages,		
25	07/03/18	Alphabets And Tokens In Computer Languages contd..,		
26	08/03/18	Representation of token,		
27	08/03/18	The evolution of programming languages;		
28	14/03/18	The science of building a compiler;		
29	15/03/18	Applications of Compiler technology		
30	15/03/18	Programming language basics; Lexical analysis		
31	17/03/18	Representation of token contd...		
32	19/03/18	Token Recognition and Finite Automata,		
33	21/03/18	Token Recognition and Finite Automata contd..,		
34	22/03/18	Implementation,		
35	22/03/18	Error Recovery.		
		MODULE-4		
36	26/03/18	Introduction to syntax analysis,		
37	28/03/18	Role Of Parsers,		
38	31/03/18	Context Free Grammars,		
39	02/04/18	Context Free Grammars contd…		

40	05/04/18	Top Down Parsers,		
41	05/04/18	Top Down Parsers contd…		
42	07/04/18	Top-down Parsing, descent parsing, FIRST and FOLLOW		
43	09/04/18	Non recursive descent parsing, error recovery in predictive parsing		
44	11/04/18	Bottom-Up Parsers,		
45	12/04/18	Bottom-Up Parsers contd…		
46	12/04/18	Operator-Precedence Parsing		
47	19/04/18	Operator-Precedence Parsing contd…		
		MODULE-5		
48	19/04/18	SYNTAX-DIRECTED TRANSLATION: Syntax-Directed definitions		
49	21/04/18	Evaluation order for SDDs-Dependency graphs,		
50	23/04/18	S-Attributed definition,L-Attributed definition,		
51	25/04/18	semantic rules with controlled side effects		
52	26/04/18	Applications of Syntax-directed translation		
53	26/04/18	Types & declarations-type expressions, type equivalence, declarations,		
54	30/04/18	storage layout for local ,sequences of declaration,		
55	02/05/18	names, fields in records and classes Translation of expressions		
56	03/05/18	Type checking, Control flow, Back patching.		
57	03/05/18	Switch statements; Intermediate code for procedures.		
58	05/05/18	CODE GENERATION: Issues in the design of Code Generator, The Target language		
59	07/05/18	Addresses in the target code		
60	09/05/18	Basic blocks and Flow graphs, Optimization of basic blocks.		
61	21/05/18	Question paper discussion		
62	23/05/18	Question paper discussion		

TEXT BOOK:

1. **Compilers- Principles, Techniques and Tools** – Alfred V Aho, Monica S. Lam, Ravi Sethi, Jeffrey D Ullman – 2nd Edition, Addison-Wesley, 2007.

REFERENCE BOOKS:

1. **Crafting a Compiler with C** – Charles N. Fischer, Richard J. leBlanc, Jr., Pearson Education, 1991.
2. **Modern Compiler Implementation in C** – Andrew W Apple Cambridge University Press, 1997.
3. **Compiler Construction Principles & Practice** – Kenneth C Louden – Thomson Education, 1997.

[Mr.Raghu Nandan R]
Staff Incharge

[Prof.C.V.Shanmukaswamy]
Head, Dept of CSE

[Dr. H.B. Phani Raju]
Principal

PRINCIPAL
SIET, TUMAKURU

Shridevi Institute of Engineering and Technology-Tumkur
(An ISO 9001-2008 Certified Institution)

SHRIDEVI EDUCATION

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

***Cover Page*: Subject Overview**
***Semester: VI Semester*- 'B' SEC** **Year:2017-18**

Subject Title: Operating Systems	*Subject Code:* 15CS64
Total contact Hours: 50	*Duration of Exam*: 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Kiran G m	*Date:31/01/2018*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 31/01/2018

***Prerequisites*:** None

Objectives:
The students will learn

- Demonstrate concept of use-case model, sequence model and state chart model for a given problem.
- Explain the facets of the unified process approach to design and build a Software system.
- Translate the requirements into implementation for Object Oriented design.
- Choose an appropriate design pattern to facilitate development procedure.

Outcomes:

The student should be

- Describe the concepts of object-oriented and basic class modelling.
- Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.
- Choose and apply a befitting design pattern for the given problem.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2017-18 (Even Sem)

COURSE PLAN

Staff : Mr. Kiran G M
Subject : *Operating Systems*

Class :VI-"B"
Sub.Code : 15CS551

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
1	01/02/2018	**Module -- 1: Introduction to operating systems, System structures:** What operating systems Does		
2	02/02/2018	Computer System architecture; Operating System structure; Operating System operations; Process management.		
3	03/02/2018	Memory management; Storage management; Protection and security; Distributed system.		
4	05/02/2018	Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface.		
5	08/02/2018	System calls; Types of system calls; System programs.		
6	09/02/2018	Operating System design and implementation.		
7	10/02/2018	Operating System structure.		
8	12/02/2018	Virtual machines; Operating system generation; System boot.		
9	15/02/2018	**Process Management** Process concept; Process scheduling		
10	16/02/2018	Operations on processes; Inter process communication		
11	17/02/2018	**Module – 2: Multi-threaded Programming** Multi-Threaded Programming: Overview		
12	19/02/2018	Multithreading models.		
13	22/02/2018	Thread Libraries; threading issues.		
14	23/02/2018	Process Scheduling: Basic concepts; Scheduling criteria.		
15	24/02/2018	Scheduling algorithms.		
16	26/02/2018	Multiple-Processor scheduling; Thread scheduling.		
17	01/03/2018	**PROCESS SYNCHRONIZATION:** Synchronization basic concepts.		
18	02/03/2018	Critical section problem. Peterson's solution. Synchronization hardware		
19	03/03/2018	Semaphores.		
20	05/03/2018	Monitors.		
21	08/03/2018	**Module 3: DEADLOCKS**:System model; Deadlock characterization		
22	13/03/2018	Methods for handling deadlocks.		
23	15/03/2018	Deadlock prevention.		
24	16/03/2018	Deadlock avoidance.		
25	17/03/2018	Deadlock detection and recovery from deadlock.		
26	19/03/2018	Deadlocks continued.		
27	22/03/2018	**Memory Management:** Memory management strategies:		

		Background; Swapping;		
28	23/03/2018	Contiguous memory allocation; Paging;		
29	24/03/2018	Structure of page table; Segmentation		
30	26/03/2018	Question papers solvation		
31	02/04/2018	**Module – 4: Virtual Memory Management**: Background.		
32	05/04/2018	Demand paging.		
33	06/04/2018	Copy-on-write; Page replacement.		
34	07/04/2018	Allocation of threads and thrashing.		
35	09/04/2018	Implementing File System: File system structure.		
36	12/04/2018	File system implementation; Directory implementation.		
37	19/04/2018	Allocation methods.		
38	20/04/2018	Allocation methods Contd…		
39	21/04/2018	Free space management		
40	23/04/2018	Free space management Cond…		
41	26/04/2018	**Module – 5: Secondary Storage Structures, Protection:** Mass Storage structures; Disk structure.		
42	30/04/2018	Disk attachment; Disk scheduling.		
43	03/05/2018	Swap space management.		
44	04/05/2018	Protection: Goals of protection.		
45	04/05/2018	Principles of protection, Domain of protection, Access matrix.		Extra Class
46	05/05/2018	Domain of protection, Access matrix.		
47	07/05/2018	Implementation of access matrix.		
48	10/05/2018	Access matrix Continued		
49	11/05/2018	Access control.		
50	12/05/2018	Revocation of access rights. Capability-Based systems.		

TEXT BOOKS:

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Principles 7th edition, Wiley-Indin, 2006

REFERENCE BOOKS:

1. Ann McHoes Ida M Fylnn, Understanding Operating System, Cengage Learning, 6th Edition
2. D.M Dhamdhere, Operating Systems: A Concept Based Approach 3rd Ed, McGraw-Hill, 2013.
3. P.C.P. Bhatt, An Introduction to Operating Systems: Concepts and Practice 4th Edition, PHI(EEE), 2014.
4. William Stallings: Operating Systems: Internals and Design Principles, 6th Edition, Pearson.

[Kiran G M]
Staff Incharge

[Prof. C V Shanmukaswamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

PRINCIPAL
SIET, TUMAKURU

Shridevi Institute of Engineering and Technology-Tumkur
(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

***Cover Page*: Subject Overview**
Semester: VI Semester 'A' **Year:2017-18**

Subject Title: **OPERATIONS RESEARCH**	*Subject Code:* 15CS653
Total contact Hours: 57	*Duration of Exam*: 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Lesson plan author: Mr.Chethan M S	*Date:30/01/2018*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 31/01/2018

***Prerequisites*:** Familiarity with Linear programming Model, knowledge of Operation research

Objectives:

Up on completion of this course the student will:

- Continue to introduce the methods of Operations Research
- Emphasize the mathematical procedures of nonlinear programming search techniques
- Introduce advanced topics such as probabilistic models (Markov chain & queuing theory) and dynamic programming
- Relate the course material to research activities (graduate students)

Outcomes:

The student should be:

- Able to manage risk.
- Able to deduce the cost of transportation.
- Able to resolve various methods to maximize the profit in industry.
- Able to understand mathematical procedures.
- Able to understand theory of games.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2017-18 (Even Sem)
COURSE PLAN

Staff : Mr. Chethan M S
Class : VI 'A'
Cours : OPERATIONS RESEARCH **Course Code :** 15CS653

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
1	02/02/2018	**Module – 1: Introduction, Linear Programming:** Introduction: The origin, nature and impact of OR;		
2	03/02/2018	Defining the problem and gathering data;		
3	05/02/2018	Formulating a mathematical model; Deriving solutions from the model;		
4	06/02/2018	Testing the model; Preparing to apply the model; Implementation .		
5	09/02/2018	**Introduction to Linear Programming Problem (LPP):** Prototype example, Assumptions of LPP,		
6	10/02/2018	Formulation of LPP various examples		
7	12/02/2018	Formulation of LPP various examples		
8	13/02/2018	Formulation of LPP various examples		
9	16/02/2018	Graphical method various examples.		
10	17/02/2018	Graphical method various examples.		
11	19/02/2018	**Module – 2: Simplex Method – 1:** The essence of the simplex method;		
12	20/02/2018	Setting up the simplex method; Types of variables,		
13	23/02/2018	Setting up the simplex method; Types of variables,		
14	24/02/2018	Algebra of the simplex method; the simplex method in tabular form;		
15	26/02/2018	Algebra of the simplex method; the simplex method in tabular form;		
16	27/02/2018	Tie breaking in the simplex method		
17	02/03/2018	Tie breaking in the simplex method		
18	03/03/2018	Big M method		
19	05/03/2018	Big M method		
20	06/03/2018	Two phase method.		
21	13/03/2018	**Module – 3: Duality Theory** - The essence of duality theory		
22	16/03/2018	Primal dual relationship,		
23	17/03/2018	Primal dual relationship,		
24	19/03/2018	Primal dual relationship,		
25	20/03/2018	conversion of primal to dual problem and vice versa		
26	23/03/2018	conversion of primal to dual problem and vice versa		
27	24/03/2018	conversion of primal to dual problem and vice versa		
28	26/03/2018	The dual simplex method.		

	/2018	The dual simplex method.		
	30/03/2018	The dual simplex method.		
31	31/03/2018	**Module – 4: Transportation and Assignment Problems:** The transportation problem,iterations:		
32	02/04/2018	Initial Basic Feasible Solution (IBFS) by North West Corner Rule method		
33	03/04/2018	Matrix Minima Method, Vogel's Approximation Method.		
34	04/04/2018	Optimal solution by Modified Distribution Method (MODI).		
35	05/04/2018	Optimal solution by Modified Distribution Method (MODI).		
36	09/04/2018	The Assignment problem		
37	10/04/2018	A Hungarian algorithm for the assignment problem.		
38	11/04/2018	A Hungarian algorithm for the assignment problem.		
39	12/04/2018	Minimization and Maximization varieties in transportation and assignment problems		
40	19/04/2018	Minimization and Maximization varieties in transportation and assignment problems		
41	23/04/2018	**Module – 5: Game Theory:** Game Theory: The formulation of two persons		
42	24/04/2018	zero sum games; saddle point, maximin and minimax principle,		
43	25/04/2018	Solving simple games- a prototype example;		
44	26/04/2018	Games with mixed strategies; Graphical solution procedur		
45	30/04/2018	Games with mixed strategies; Graphical solution procedur		
46	04/05/2018	Games with mixed strategies; Graphical solution procedur		
47	05/05/2018	**Metaheuristics:** The nature of Metaheuristics		
48	07/05/2018	Tabu Search		
49	08/05/2018	Simulated Annealing, Genetic Algorithms.		
50	11/05/2018	Question paper		
51	12/05/2018	Revision module 1		
52	18/05/2018	Revision module 2		
53	19/05/2018	Revision module 3		
54	21/05/2018	Revision module 4		
55	22/05/2018	Revision module 5		
56	25/05/2018	Solving Question Papers		
57	26/05/2018	Solving Question Papers		

TEXT BOOKS:

1. D.S. Hira and P.K. Gupta, Operations Research, (Revised Edition), Published by S. Chand & Company Ltd, 2014

REFERENCE BOOKS:

1. S Kalavathy, Operation Research, Vikas Publishing House Pvt Limited, 01-Aug-2002

2. S D Sharma, Operation Research, Kedar Nath Ram Nath Publishers

[Mr. Chethan M S]
Staff Incharge

[Prof. C V Shanmukaswamy]
HOD, CSE

H.O.D.
Dept. of C.S. & E.,
SIET, TUMKUR-6.

[Dr. H B Phani Raju]
Principal

PRINCIPAL
SIET, TUMAKURU

Sri Shridevi Charitable Trust (R)
SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
Sira Road, Tumkur – 572 106. Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/ WEF: 01/02/2018

Academic Year 2017-18 (EVEN Sem)

LECTURE PLAN

***Cover Page*: Course Overview**
Semester: VI Semester B **Year: 2017-2018**

Course Title: **Cryptography, Network Security And Cyber Law**	*Course Code:* **15CS61**
Total contact Hours: **66**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Mrs. Beena G Pillai**	*Date:* **01/02/2018**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **01/02/2018**

Objectives:

This course :

- Provides an exposure to current and emerging trends in Computer Architectures.
- The emphasis is on studying and analyzing fundamental issues in architecture design and their impact on performance.
- Focuses on advanced computer architectures and low-level system software such as pipelined and Multiprocessor systems.

Outcomes:

The student should be able to:

- Understand the advanced concepts of computer architecture.
- Investigating modern design structures of Pipelined and Multiprocessors systems.
- Become acquainted with recent computer architectures and I/O devices, as well as the low-level language required to drive/manage these types of advanced hardware.

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
Sira Road, Tumkur – 572 106. Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2017 - 2018/ WEF: 01/02/2018

Staff: Mrs. Beena G Pillai **Class: VI Sem**
Course Name: Cryptography, Network Security And Cyber Law **Course Code: 15CS61**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
Module – 1 : Introduction – Cyber Attacks				
1	02/02/18	Cyber Attacks		
2	03/02/18	Defence Strategies and Techniques		
3	05/02/18	Guiding Principles		
4	06/02/18	Mathematical Background for Cryptography - Modulo Arithmetic's		
5	07/02/18	The Greatest Comma Divisor		
6	09/02/18	Useful Algebraic Structures, Chinese Remainder Theorem		
7	10/02/18	Basics of Cryptography - Preliminaries		
8	12/02/18	Elementary Substitution Ciphers		
9	14/02/18	Elementary Transport Ciphers		
10	16/02/18	Other Cipher Properties		
11	17/02/18	Secret Key Cryptography – Product Ciphers,		
12	19/02/18	DES Construction		
13	20/02/18	Revision		
14	21/02/18	Revision		
Module -2 : Public Key Cryptography & RSA				
15	23/02/18	Public Key Cryptography and RSA – RSA Operations		
16	24/02/18	Why Does RSA Work?, Performance, Applications, Practical Issues		
17	26/02/18	Continue.		
18	27/02/18	Cryptographic Hash - Introduction		
19	28/02/18	Properties		
20	02/03/ 18	Construction, Applications and Performance		
21	03/03/ 18	The Birthday Attack		
22	05/03/ 18	Discrete Logarithm and its Applications – Introduction		
23	06/03/ 18	Diffie-Hellman Key Exchange		
24	07/03/ 18	Other Applications.		
25	13/03/ 18	Revision		
26	14/03/ 18	Revision		
Module -3 : Key Management				
27	16/03/ 18	Key Management – Introduction		
28	17/03/ 18	Digital Certificates		
29	19/03/ 18	Public Key Infrastructure		

	20/03/ 18	Identity–based Encryption		
31	21/03/ 18	Identity–based Encryption		
32	23/03/ 18	Authentication–I - One way Authentication		
33	24/03/ 18	Mutual Authentication, Dictionary Attacks,		
34	26/03/ 18	Authentication – II – Centalised Authentication		
35	27/03/ 18	The Needham-Schroeder Protocol, Kerberos, Biometrics		
36	28/03/ 18	IPSec- Security at the Network Layer – Security at Different layers: Pros and Cons		
37	31/03/ 18	IPSec in Action		
38	02/04/ 18	Internet Key Exchange (IKE) Protocol, Security Policy and IPSEC		
39	03/04/ 18	Virtual Private Networks		
40	04/04/ 18	Security at the Transport Layer - Introduction, SSL Handshake Protocol		
41	06/04/ 18	SSL Record Layer Protocol, OpenSSL		
42	07/04/ 18	Revision		
43	09/04/ 18	Revision		
Module -4 : IEEE 802.11 Wireless LAN Security				
44	10/04/ 18	IEEE 802.11 Wireless LAN Security – Background		
45	11/04/ 18	Authentication, Confidentiality and Integrity, Viruses, Worms, and Other Malware		
46	20/04/ 18	Firewalls – Basics, Practical Issues		
47	21/04/ 18	Intrusion Prevention and Detection - Introduction, Prevention Versus Detection		
48	23/04/ 18	Types of Instruction Detection Systems		
49	24/04/ 18	DDoS Attacks Prevention/Detection		
50	25/04/ 18	Web Service Security – Motivation, Technologies for Web Services		
51	30/04/ 18	WS- Security, SAML, Other Standards.		
52	02/05/ 18	Revision		
Module -5 : IT act aim and Objectives				
53	04/05/ 18	IT act aim and objectives, Scope of the act, Major Concepts		
54	05/05/ 18	Important provisions, Attribution, acknowledgement, and dispatch of electronic records		
55	07/05/ 18	Secure electronic records and secure digital signatures		
56	08/05/ 18	Regulation of certifying authorities: Appointment of Controller and Other officers		
57	09/05/ 18	Digital Signature certificates		
58	11/05/ 18	Duties of Subscribers, Penalties and adjudication		
59	12/05/ 18	The cyber regulations appellate tribunal, Offences		
60	18/05/ 18	Network service providers not to be liable in certain cases		
61	19/05/ 18	Miscellaneous Provisions.		
62	21/05/ 18	Question paper discussion		
63	22/05/ 18	Revision		
64	23/05/18	Revision		

	25/05/18	Revision		
06	26/05/18	Revision		

Text Books:

1. Cryptography, Network Security and Cyber Laws – Bernard Menezes, Cengage Learning, 2010 edition (Chapters-1,3,4,5,6,7,8,9,10,11,12,13,14,15,19(19.1- 19.5),21(21.1-21.2),22(22.1-22.4),25

Reference Books:

1. Cryptography and Network Security- Behrouz A Forouzan, Debdeep Mukhopadhyay, Mc-GrawHill, 3rd Edition, 2015.
2. Cryptography and Network Security- William Stallings, Pearson Education, 7th Edition.
3. Cyber Law simplified- Vivek Sood, Mc-GrawHill, 11th reprint , 2013.
4. Cyber security and Cyber Laws, Alfred Basta, Nadine Basta, Mary brown, ravindra kumar, Cengage learning

[Mrs. Beena G Pillai]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

PRINCIPAL
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE LECTURE PLAN

Semester: VI 'B' SEC **Year: 2017-2018**

Subject Title: COMPUTER GRAPHICS AND VISUALIZATION	Subject Code: **15CS62**
Total contact Hours: 63	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 20
Lesson plan author: Ms. Meghana D K	Date: 31/01/2018
Checked by: Prof. C V Shanmuka Swamy	Date: 31/01/2018

OBJECTIVES

- Explain hardware, software and OpenGL Graphics Primitives.
- Illustrate interactive computer graphic using the OpenGL.
- Design and implementation of algorithms for 2D graphics Primitives and attributes.
- Demonstrate Geometric transformations, viewing on both 2D and 3D objects.
- Infer the representation of curves, surfaces, Color and Illumination models

OUTCOMES

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate Geometric transformations on both 2D and 3D objects.
- Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

SL No	DATE	TOPIC NAMES	TOPICS COVERED	REMARKS
1	1/2/2018	**Module-1: Overview: Computer Graphics and OpenGL:** Computer Graphics: Basics of computer graphics		
2	2/2/2018	Application of Computer Graphics		
3	3/2/2018	Video Display Devices: Random Scan and Raster Scan displays		
4	5/2/2018	color CRT monitors, Flat panel displays.		
5	6/2/2018	Raster-scan systems: video controller, raster scan Display processor, Graphics workstations and viewing systems		
6	8/2/2018	Input devices, graphics networks, graphics on the internet, graphics software.		
7	9/2/2018	OpenGL: Introduction to OpenGL ,coordinate reference frames		
8	10/2/2018	Specifying two-dimensional world coordinate reference frames in OpenGL,		
9	12/2/2018	OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes		
10	15/2/2018	OpenGL point attribute functions, OpenGL line attribute functions		
11	16/2/2018	Line drawing algorithms(DDA, Bresenham's)		
12	17/2/2018	circle generation algorithms (Bresenham's).		
13	19/2/2018	**Module – 2: Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas		
14	20/2/2018	OpenGL polygon fill area functions, fill area attributes.		
15	22/2/2018	General scan line polygon fill algorithm		
16	23/2/2018	OpenGL fill-area attribute functions.		
17	24/2/2018	2DGeometric Transformations: Basic 2D Geometric Transformations		
18	26/2/2018	Matrix representations and homogeneous coordinates.		
19	27/2/2018	Inverse transformations,		
20	1/3/2018	2D Composite transformations, Other 2D transformations		
21	2/3/2018	Raster methods for geometric transformations		
22	3/3/2018	OpenGL raster transformations, OpenGL geometric transformations function		
23	5/3/2018	2D viewing: 2D viewing pipeline,		
24	6/3/2018	OpenGL 2D viewing functions.		

25	8/3/2018	**Module – 3: Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping: clipping window		
26	13/3/2018	normalization and viewport transformations		
27	15/3/2018	clipping algorithms,2D point clipping		
28	16/3/2018	2D line clipping algorithms: cohen-sutherland line clipping		
29	17/3/2018	only -polygon fill area clipping: Sutherland-Hodgeman polygon clipping algorithm only		
30	19/3/2018	3DGeometric Transformations: 3D translation, rotation, scaling		
31	20/3/2018	composite 3D transformations, other 3D transformations		
32	22/3/2018	Affine transformations		
33	23/3/2018	OpenGL geometric transformations functions		
34	24/3/2018	Color Models: Properties of light, color models, RGB and CMY color models.		
35	26/3/2018	Illumination Models: Light sources, basic illumination models-Ambient light		
36	27/3/2018	diffuse reflection, specular and phong 10 Hours model, Corresponding openGL functions.		
37	31/3/2018	**Module – 4: 3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts		
38	2/4/2018	3D viewing pipeline, 3D viewing coordinate parameters		
39	3/4/2018	Transformation from world to viewing coordinates,		
40	5/4/2018	Projection transformation		
41	6/4/2018	orthogonal projections,		
42	7/4/2018	perspective projections		
43	9/4/2018	The viewport transformation.		
44	10/4/2018	3D screen coordinates		
45	12/4/2018	OpenGL 3D viewing functions.		
46	19/4/2018	Visible Surface Detection Methods: Classification of visible surface Detection algorithms		
47	20/4/2018	Back face detection		
48	21/4/2018	Depth buffer method		
49	23/4/2018	OpenGL visibility detection functions.		
50	24/4/2018	**Module – 5 Input& interaction, Curves and Computer Animation:** Input and Interaction: Input devices		
51	26/4/2018	Clients and servers, Display Lists		
52	30/4/2018	Display Lists and Modelling		
53	3/5/2018	Programming Event Driven Input, Menus Picking		
54	4/5/2018	Building Interactive Models		
55	5/5/3018	Animating Interactive programs		
56	7/5/2018	Design of Interactive programs, Logic operations.		
57	8/5/2018	Curved surfaces, quadric surfaces.		
58	10/5/2018	OpenGL Quadric-Surface and Cubic-Surface Functions		
59	11/5/2018	Bezier Spline Curves, Bezier surfaces		
60	12/5/2018	OpenGL curve functions		

61	24/5/2018	Corresponding openGL functions.		
62	25/5/2018	Question paper Discussion		
63	26/5/2018	Question paper Discussion		

Text Books:

1. Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd / 4th Edition, Pearson Education,2011

2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL, 5th edition. Pearson Education, 2008

Reference Books:

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Huges Computer graphics with OpenGL: pearson education

2. Xiang, Plastock : Computer Graphics , sham's outline series, 2nd edition, TMG.

3. Kelvin Sung, Peter Shirley, steven Baer : Interactive Computer Graphics, concepts and applications, Cengage Learning

4. M M Raiker, Computer Graphics using OpenGL, Filip learning/Elsevier

Meghana.D.K

Ms.Meghana D K
Staff-Incharge

Prof. C V Shanmuka Swamy
Head, Dept of CSE

Dr. H.B Phani Raju
Principal

PRINCIPAL
B.G.S., TUMAKURU

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: Course Overview
Semester: VI "B"Section **Year: 2017-2018**

Course Title: SYSTEM SOFTWARE & COMPILER DESIGN	Course Code: **15CS63**
Total contact Hours: 63	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 20
Course plan author: Mrs. Prathibha T S	Date: 31/01/2018
Checked by: Prof.C.V.shanmukaswamy	Date: 31/01/2018

PREREQUISITES: Knowledge of DFA, NFA and the system software compiler.

OBJECTIVES
The study of this course will teach the student to

- Learn how a compiler works and know about the powerful compiler generation tools, which are useful to the other non-compiler applications.
- Learn how to write programs that execute faster using parse trees.
- Describe the design of a compiler including its phases and components and acquire information about scanner, parser, code generator, and optimizer.
- Identify the similarities and differences among various parsing techniques and grammar transformation techniques.
- Describe the role of the compiler in ensuring the security, privacy and integrity of data.

OUTCOMES

Upon completion of this course will student will be

- Able to explain how a compiler works and know about the powerful compiler generation tools, which are useful to the other non-compiler applications.
- Able to explain how to write programs that execute faster using parse trees.
- Able to describe the design of a compiler including its phases and components and acquire information about scanner, parser, code generator, and optimizer.
- Able to identify the similarities and differences among various parsing techniques and grammar transformation techniques.
- Able to describe the role of the compiler in ensuring the security, privacy and integrity of data.

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		MODULE-1		
01	01/02/18	Introduction to System Software		
02	02/02/18	Machine Architecture of SIC		
03	06/02/18	Machine Architecture of SIC/XE		
04	07/02/18	**Assemblers:** Basic assembler functions		
05	08/02/18	Machine dependent assembler features		
06	09/02/18	Machine dependent assembler features contd...,		
07	10/02/18	Machine independent assembler features		
08	14/02/18	Machine independent assembler features contd....,		
09	15/02/18	Assembler design options		
10	16/02/18	**Macroprocessors:** Basic macro processor functions		
11	17/02/18	Basic macro processor functions contd...,		
		MODULE-2		
12	20/02/18	**Loaders and Linkers:** Basic Loader Functions		
13	21/02/18	Machine Dependent Loader Features		
14	22/02/18	Relocation, program linking		
15	23/02/18	Algorithm and data structures for a linking loader		
16	24/02/18	Machine Independent Loader Features		
17	27/02/18	Automatic library search		
18	28/02/18	Automatic library search contd...,		
19	01/03/18	Loader Design Options		
20	02/03/18	Loader Design Options contd...,		
21	03/03/18	Loader Design Options contd...,		
22	06/03/18	Implementation Examples		
23	07/03/18	Implementation Examples contd...,		
		MODULE-3		
24	08/03/18	**Lexical Analysis:** Introduction,		
25	13/03/18	Alphabets and Tokens In Computer Languages,		
26	14/03/18	Alphabets And Tokens In Computer Languages contd..,		
27	15/03/18	Representation of token,		
28	16/03/18	Representation of token contd...		
29	17/03/18	Token Recognition and Finite Automata,		
30	20/03/18	Token Recognition and Finite Automata contd..,		
31	21/03/18	Implementation,		
32	22/03/18	Error Recovery,		
33	23/03/18	Error Recovery contd..		
		MODULE-4		
34	24/03/18	Introduction to syntax analysis,		
35	27/03/18	Role Of Parsers,		
36	28/03/18	Context Free Grammars,		
37	31/03/18	Context Free Grammars contd...		
38	03/04/18	Top Down Parsers,		
39	04/04/18	Top Down Parsers contd...		
40	05/04/18	Bottom-Up Parsers,		

41	06/04/18	Bottom-Up Parsers contd…		
42	07/04/18	Operator-Precedence Parsing		
43	10/04/18	Operator-Precedence Parsing contd…		
		MODULE-5		
44	11/04/18	**SYNTAX-DIRECTED TRANSLATION**: Syntax-Directed definitions		
45	12/04/18	Evaluation order for SDDs-Dependency graphs,		
46	19/04/18	S-Attributed definitions-L-Attributed definition, semantic rules with controlled side effects		
47	20/04/18	Applications of Syntax-directed translation		
48	21/04/18	Types & declarations-type expressions, type equivalence, declarations,		
49	24/04/18	storage layout for local sequences of declaration,		
50	25/04/18	names, fields in records and classes Translation of expressions		
51	26/04/18	Type checking, Control flow		
52	02/05/18	Back patching		
53	03/05/18	Switch statements		
54	04/05/18	Intermediate code for procedures.		
55	05/05/18	CODE GENERATION: Issues in the design of Code Generator, The target language		
56	08/05/18	Addresses in the target code		
57	09/05/18	Basic blocks and Flow graphs,		
58	10/05/18	Optimization of basic blocks.		
59	11/05/18	Revision and Question paper discussion		
60	12/05/18	Revision and Question paper discussion		
61	24/05/18	Revision and Question paper discussion		
62	25/05/18	Revision and Question paper discussion		
63	26/05/18	Revision and Question paper discussion		

TEXT BOOK:

1. System Software by Leland. L. Beck, D Manjula, 3rd edition, 2012
2. Compilers-Principles, Techniques and Tools by Alfred V Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman, Pearson, 2nd edition, 2007

REFERENCE BOOKS:

1. Systems programming – Srimanta Pal, Oxford university press, 2016
2. System programming and Compiler Design, K C Louden, Cengage Learning
3. System software and operating system by D. M. Dhamdhere TMG
4. Compiler Design, K Muneeswaran, Oxford University Press 2013.

[Mrs. Pavithra T S]
Staff Incharge

[Prof.C.V Sreekumukaswamy]
Head, Dept of CSE

[Dr.H B Phani Raju]
Principal

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Lesson Plan

***Cover Page*: Course Overview**
***Semester:* VI A or VI B Section** **Year: 2017-2018**

Course Title: MOBILE APPLICATION DEVELOPMENT	*Course Code:* 15CS661
Total contact Hours:52	*Duration of Exam:* 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Lesson plan author: Mr. Mallesh H.L	*Date:* 31/01/2018
Checked by: Prof. C.V Shanmukaswamy	*Date:* 31/01/2018

***Prerequisites*:** OS Concepts , Mobile Devices Usage

Course Objectives:
This course will enable students to

- Learn to setup Android application development environment
- Illustrate user interfaces for interacting with apps and triggering actions
- Interpret tasks used in handling multiple activities
- Identify options to save persistent application data
- Appraise the role of security and performance in Android applications

Course Outcomes:
After studying this course, students will be able to

- Create, test and debug Android application by setting up Android development environment
- Implement adaptive, responsive user interfaces that work across a wide range of devices.
- Infer long running tasks and background work in Android applications
- Demonstrate methods in storing, sharing and retrieving data in Android applications
- Analyze performance of android applications and understand the role of permissions and security
- Describe the steps involved in publishing Android application to share with the world

LECTURE PLAN

Course In-Charge: Mr. Mallesh H.L **Course Code: 15CS661**

Course: MOBILE APPLICATION DEVELOPMENT **Class: VI *A Sem or VI B Sem***

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		Module 1		
01	1/2/2018	Get started,		
02	2/2/2018	Build your first app,		
03	5/2/2018	Activities,		
04	7/2/2018	Testing,		
05	8/2/2018	debugging and using support libraries		
06	9/2/2018	Revision		
07	12/2/2018	Revision		
08	14/2/2018	Revision		
09	15/2/2018	Revision		
10	16/2/2018	Revision		
11	19/2/2018	Revision		
		Module 2		
12	21/2/2018	User Interaction		
13	22/2/2018	, Delightful user experience,		
14	23/2/2018	Testing your UI		
15	26/2/2018	Revision		
16	28/2/2018	Revision		
17	1/3/2018	Revision		
18	2/3/2018	Revision		
19	5/3/2018	Revision		
20	7/3/2018	Revision		
21	8/3/2018	Revision		
22	14/3/2018	Revision		
		Module 3		
23	15/3/2018	Background Tasks,		
24	16/3/2018	Triggering,		
25	19/3/2018	scheduling and optimizing background tasks		
26	21/3/2018	Revision		
27	22/3/2018	Revision		

28	23/3/2018	Revision		
29	26/3/2018	Revision		
30	28/3/2018	Revision		
31	2/4/2018	Revision		
32	4/4/2018	Revision		
33	5/4/2018	Revision		
		Module 4		
34	6/4/2018	All about data,		
35	9/4/2018	Preferences and Settings,		
36	11/4/2018	Storing data using SQLite,		
37	12/4/2018	, Sharing data with content providers,		
38	19/4/2018	Loading data using Loaders		
39	20/4/2018	Revision		
40	23/4/2018	Revision		
41	25/4/2018	Revision		
42	26/4/2018	Revision		
43	30/4/2018	Revision		
44	2/5/2018	Revision		
		Module 5		
45	3/5/2018	Permissions,		
46	4/5/2018	Performance and Security,		
47	7/5/2018	Firebase and AdMob		
48	9/5/2018	Publish		
49	10/5/2018	Revision		
50	11/5/2018	Revision		
51	24/5/2018	Revision		
52	25/5/2018	Revision		

Question paper pattern:

The question paper will have TEN questions.
There will be TWO questions from each module.
Each question will have questions covering all the topics under a module.
The students will have to answer FIVE full questions, selecting ONE full question from each module.

Text Books:

1. Google Developer Training, "Android Developer Fundamentals Course – Concept Reference", Google Developer Training Team, 2017.
https://www.gitbook.com/book/google-developer-training/android-developerfundamentals-course-concepts/details (Download pdf file from the above link)

Reference Books:

1. Erik Hellman, "Android Programming – Pushing the Limits", 1st Edition, Wiley India Pvt Ltd, 2014.
2. Dawn Griffiths and David Griffiths, "Head First Android Development", 1st Edition, O'Reilly SPD Publishers, 2015.
3. J F DiMarzio, "Beginning Android Programming with Android Studio", 4th Edition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126565580
4. Anubhav Pradhan, Anil V Deshpande, " Composing Mobile Apps" using Android, Wiley 2014, ISBN: 978-81-265-4660-2

[Mr.Mallesh H.L]	[Prof. C.V Shanmukaswamy]	[Dr. Phani Raju H.B]
Staff In-Charge	Head, Dept of CSE	Principal

PRINCIPAL
SET, TUMAKURU-3

COURSE PLAN

***Cover Page*: Subject Overview**
Semester: VI Semester 'B' **Year:2017-18**

Subject Title: **OPERATIONS RESEARCH**	*Subject Code:* 15CS653
Total contact Hours: 54	*Duration of Exam:* 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Suthan R	*Date:30/01/2018*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 31/01/2018

***Prerequisites*:** Familiarity with Linear programming Model, knowledge of Operation research

Objectives:

Up on completion of this course the student will:

- Continue to introduce the methods of Operations Research
- Emphasize the mathematical procedures of nonlinear programming search techniques
- Introduce advanced topics such as probabilistic models (Markov chain & queuing theory) and dynamic programming
- Relate the course material to research activities (graduate students)

Outcomes:

The student should be:

- Able to manage risk.
- Able to deduce the cost of transportation.
- Able to resolve various methods to maximize the profit in industry.
- Able to understand mathematical procedures.
- Able to understand theory of games.

SHRIDEVI

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2017-18 (Even Sem)
COURSE PLAN

Staff : Mr.Suthan R
Subject : **OPERATIONS RESEARCH**

Class :VI 'B'
Sub.Code : 15CS653

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
1	01/02/2018	**Module – 1: Introduction, Linear Programming:** Introduction: The origin, nature and impact of OR;		
2	05/02/2018	Defining the problem and gathering data;		
3	06/02/2018	Formulating a mathematical model; Deriving solutions from the model;		
4	07/02/2018	Testing the model; Preparing to apply the model; Implementation .		
5	08/02/2018	**Introduction to Linear Programming Problem (LPP):** Prototype example, Assumptions of LPP,		
6	12/02/2018	Formulation of LPP various examples		
7	13/02/2018	Formulation of LPP various examples		
8	14/02/2018	Formulation of LPP various examples		
9	15/02/2018	Graphical method various examples.		
10	19/02/2018	Graphical method various examples.		
11	20/02/2018	**Module – 2: Simplex Method – 1:** The essence of the simplex method;		
12	21/02/2018	Setting up the simplex method; Types of variables,		
13	22/02/2018	Setting up the simplex method; Types of variables,		
14	26/02/2018	Algebra of the simplex method; the simplex method in tabular form;		
15	27/02/2018	Algebra of the simplex method; the simplex method in tabular form;		
16	28/02/2018	Tie breaking in the simplex method		
17	05/03/2018	Tie breaking in the simplex method		
18	06/03/2018	Big M method		
19	07/03/2018	Big M method		
20	08/03/2018	Two phase method.		
21	13/03/2018	**Module – 3: Duality Theory** - The essence of duality theory		
22	14/03/2018	Primal dual relationship,		
23	15/03/2018	Primal dual relationship,		
24	19/03/2018	Primal dual relationship,		
25	20/03/2018	conversion of primal to dual problem and vice versa		
26	21/03/2018	conversion of primal to dual problem and vice versa		
27	22/03/2018	conversion of primal to dual problem and vice versa		
28	26/03/2018	The dual simplex method.		
29	27/03/2018	The dual simplex method.		
30	28/03/2018	The dual simplex method.		

31	29/03/2018	**Module – 4: Transportation and Assignment Problems:** The transportation problem,iterations:		
32	02/04/2018	Initial Basic Feasible Solution (IBFS) by North West Corner Rule method		
33	03/04/2018	Matrix Minima Method, Vogel's Approximation Method.		
34	04/04/2018	Optimal solution by Modified Distribution Method (MODI).		
35	05/04/2018	Optimal solution by Modified Distribution Method (MODI).		
36	09/04/2018	The Assignment problem		
37	10/04/2018	A Hungarian algorithm for the assignment problem.		
38	11/04/2018	A Hungarian algorithm for the assignment problem.		
39	12/04/2018	Minimization and Maximization varieties in transportation and assignment problems		
40	19/04/2018	Minimization and Maximization varieties in transportation and assignment problems		
41	23/04/2018	**Module – 5: Game Theory:** Game Theory: The formulation of two persons		
42	24/04/2018	zero sum games; saddle point, ,		
43	25/04/2018	maximin and minimax principle		
44	26/04/2018	maximin and minimax principle Contd….		
45	30/04/2018	Solving simple games- a prototype example;		
46	02/05/2018	Games with mixed strategies; Graphical solution procedur		
47	03/05/2018	Games with mixed strategies; Graphical solution procedur		
48	07/05/2018	Games with mixed strategies; Graphical solution procedur		
49	08/05/2018	Games with mixed strategies; Graphical solution procedur		
50	09/05/2018	**Metaheuristics:** The nature of Metaheuristics		
51	10/05/2018	Tabu Search		
52	24/05/2018	Simulated Annealing, Genetic Algorithms.		
53	25/05/2018	Revision		
54	26/05/2018	Question paper		

TEXT BOOKS:

1. D.S. Hira and P.K. Gupta, Operations Research, (Revised Edition), Published by S. Chand & Company Ltd, 2014

REFERENCE BOOKS:

1. S Kalavathy, Operation Research, Vikas Publishing House Pvt Limited, 01-Aug-2002
2. S D Sharma, Operation Research, Kedar Nath Ram Nath Publishers.

[Suthan R]
Staff Incharge

[Prof. C V Shanmukaswamy]
HOD, CSE

[Dr. H B Phani Raju]
Principal

Shridevi Institute of Engineering and Technology-Tumkur
(An ISO 9001-2002 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester: VI Semester, A & B sec

Year: 2018-19

Course Title: PYTHON APPLICATION PROGRAMMING	**Course Code:** 15CS664
Total contact Hours: 56	**Duration of Exam:** 03 Hrs.
Total exam marks: 80	**Total I.A. marks:** 20
Course plan author: Mr. Basavesha D	**Date:** 31/01/2018
Checked by: Prof. C.V.Shanmuka Swamy	**Date:** 01/02/2018

Prerequisites: Object oriented concepts, Data structures, C.

Course objectives: This course will enable students to

- Learn Syntax and Semantics and create Functions in Python.
- Handle Strings and Files in Python.
- Understand Lists, Dictionaries and Regular expressions in Python.
- Implement Object Oriented Programming concepts in Python
- Build Web Services and introduction to Network and Database Programming in Python.

Course outcomes: The students should be able to:

- Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
- Demonstrate proficiency in handling Strings and File Systems.
- Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.
- Interpret the concepts of Object-Oriented Programming as used in Python.
- Implement exemplary applications related to Network Programming, Web Services and Databases in Python.

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Shridevi Institute of Engineering and Technology-Tumkur
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Name of the Course Instructor: Mr. Basavesha D
Course Code: 15CS664
Course: PYTHON APPLICATION PROGRAMMING
Class: VI SEM, A & B Section

Sl. No	Date	Topic	Topics Covered	Remarks
1	01/02/18	**MODULE 1:** Why should you learn to write programs,		
2	02/02/18	Variables,		
3	05/02/18	expressions and statements,		
4	07/02/18	expressions and statements continued		
5	08/02/18	expressions and statements continued		
6	09/02/18	Conditional execution,		
7	12/02/18	Conditional execution cont…		
8	14/02/18	Functions in python,		
9	15/02/18	Functions in python cont...,		
10	16/02/18	Functions in python cont...,		
11	19/02/18	**MODULE 2:** Iteration in python.		
12	21/02/18	Iteration statements in python cont….		
13	22/02/18	Loop patterns,		
14	23/02/18	Debugging.		
15	26/02/18	Strings in python.		
16	28/02/18	String comparison, string methods,		
17	01/03/18	Parsing strings , Format operator, Debugging		
18	02/03/18	Files Persistence, Opening files ,Text files and lines		
19	05/03/18	Using try, except, and open		
20	07/03/18	Writing files, Debugging.		
21	08/03/18	**MODULE 3:** Lists A list is a sequence , Lists are mutable ,Traversing a list,		
22	14/03/18	List operations, List slices, List methods,		
23	15/03/18	Lists and functions,Lists and strings ,Parsing lines.		
24	16/03/18	Dictionaries as a set of counters,		
25	19/03/18	Dictionaries and files, Looping and dictionaries, Advanced text parsing.		
26	21/03/18	Tuples are immutable, Comparing tuples, Tuple assignment .		
27	22/03/18	Dictionaries and tuples ,Multiple assignment with dictionaries ,The most common words		
28	23/03/18	Regular expressions		
29	26/03/18	Character matching in regular expressions, Extracting data using regular expressions		
30	28/03/18	Combining searching and extracting , Escape character		
31	02/04/18	**MODULE 4:** Classes and objects		
32	04/04/18	User-defined types, Rectangles		
33	05/04/18	Copying and Debugging.		

34	06/04/18	Classes and functions		
35	09/04/18	Classes and functions cont….		
36	05/04/18	Modifiers, Debugging.		
37	12/04/18	Classes and methods		
38	19/04/18	Classes and methods cont….		
39	20/04/18	The init method		
40	23/04/18	Polymorphism and Debugging.		
41	25/04/18	**MODULE 5:** Networked programs,		
42	26/04/18	Networked programs cont…		
43	30/04/18	Networked programs cont…		
44	02/05/18	Using Web Services		
45	03/05/18	Parsing XML ,Looping through nodes		
46	04/05/18	Application Programming Interfaces ,Google geo coding web service , Security and API usage		
47	07/05/18	Using databases and SQL		
48	09/05/18	Using databases and SQL cont…		
49	10/05/18	Programming with multiple tables		
50	05/05/18	Three kinds of keys ,Using JOIN to retrieve data .		
51	17/05/18	Question paper discussion		
52	18/05/18	Question paper discussion		
53	21/05/18	Question paper discussion		
54	23/05/18	Question paper discussion		
55	24/05/18	Question paper discussion		
56	25/05/18	Question paper discussion		

Text Books:

1. Charles R. Severance, "Python for Everybody: Exploring Data Using Python 3", 1st Edition, CreateSpace Independent Publishing Platform, 2016. (http://do1.drchuck.com/pythonlearn/EN_us/pythonlearn.pdf) (Chapters 1 – 13, 15)
2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2ndEdition, Green Tea Press, 2015. (http://greenteapress.com/thinkpython2/thinkpython2.pdf) (Chapters 15, 16, 17) (Download pdf files from the above links).

Reference Books:

1. Charles Dierbach, "Introduction to Computer Science Using Python", 1st Edition,Wiley India Pvt Ltd. ISBN-13: 978-8126556014
2. Mark Lutz, "Programming Python", 4th Edition, O'Reilly Media, 2005.ISBN-13:978-9350232873
3. Wesley J Chun, "Core Python Applications Programming", 3rd Edition, Pearson Education India, 2015. ISBN-13: 978-9332555365
4. Roberto Tamassia, Michael H Goldwasser, Michael T Goodrich, "Data Structures and Algorithms in Python",1stEdition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126562176
5. Reema Thareja, "Python Programming using problem solving approach", Oxford university press, 2017

[Mr. Basavesha.D]
Staff Incharge

[Prof. C.V.Shanmuka Swamy]
Head, Dept of CSE

[Dr H.B. Phani Raju]
Principal

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COURSE PLAN

***Cover Page*: Subject Overview**
Semester: VIII

Year:2017-18

Subject Title: **SOFTWARE TESTING**	*Subject Code:* 10CS842
Total contact Hours: 57	*Duration of Exam*: 03 Hrs.
Total exam marks: 100	*Total I.A. marks:* 25
Lesson plan author: Mr.Chethan M S	*Date:*31/01/2018
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 31/01/2018

***Prerequisites*:** Familiarity with Software Testing concepts, STLC Model and knowledge of Testcase Design and bug fixing.

Objectives:
The students will learn:

- To teach Students basic principles about Sofware Testing, Finding defects which may get created by the programmer while developing software.
- Teach students enough Gaining confidence in and proving information about the level of quality.
- To prevent defects & make sure that the end results meets the business and user requirements.
- To describe strategies for generating system test cases.
- Software testing shall also verify documentation.

Outcomes:
The student should be:

- Understand the fundamentals of Sofware Testing, software lifcycle and testing rle.
- Understand specialized testing & Understand test design.
- Have the ability to Understand test management & Understand test automation & tools.
- Understand other skills in testing & getting to the next level in software testing.
- Explore the basic test issues while test the applications
- Identify and fix the major bugs & report to the developer.

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DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2017-18 (Even Sem)

COURSE PLAN

Staff : Mr. Chethan M S
Course : Software Testing

Class : VIII
Course Code : 10CS842

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
01	01/02/18	**PART-A** **Unit – 1: A Perspective on Testing, Examples:** Basic definitions, Test cases,		
02	02/02/18	Insights from a Venn diagram, Identifying test cases,		
03	03/02/18	Error and fault taxonomies, Levels of testing.		
04	07/02/18	Examples: Generalized pseudocode, The triangle problem,		
05	08/02/18	The NextDate function, The commission problem,		
06	09/02/18	The SATM (Simple Automatic Teller Machine) problem,		
07	10/02/18	The currency converter, Saturn windshield wiper.		
08	14/02/18	**Unit – 2: Boundary Value Testing, Equivalence Class Testing, Decision Table- Based Testing:** Boundary value analysis,		
09	15/02/18	Robustness testing, Worst-case testing, Special value testing,		
10	16/02/18	Examples, Random testing, Equivalence classes,		
11	17/02/18	Equivalence test cases for the triangle problem		
12	21/02/18	NextDate function, and the commission problem, Guidelines and observations.		
13	22/02/18	Decision tables,Test cases for the triangle problem,		
14	23/02/18	NextDate function, and the commission problem,		
15	24/02/18	Guidelines and observations.		
16	28/02/18	**Unit – 3: Path Testing, Data Flow Testing:** DD paths,		
17	01/03/18	Test coverage metrics,		
18	02/03/18	Basis path testing,		
19	03/03/18	guidelines and observations.		
20	07/03/18	Definition-Use testing, Slice-based testing		
21	08/03/18	Definition-Use testing, Slice-based testing continued…		
22	14/03/18	Guidelines and observations.		
23	15/03/18	**Unit – 4: Levels of Testing, Integration Testing:** Traditional view of testing levels,		
24	16/03/18	Alternative life-cycle models,		
25	17/03/18	The SATM system,		
26	21/03/18	Separating integration and system testing.		
27	22/03/18	A closer look at the SATM system,		
28	23/03/18	Decomposition-based,		
29	24/03/18	call graph-based, Path-based integrations.		
30	28/03/18	**PART-B** **Unit – 5: System Testing, Interaction Testing:** Threads, Basic concepts for requirements specification,		

	/18	Finding threads, Structural strategies and functional strategies for thread testing,		
32	04/04/18	Finding threads, Structural strategies and functional strategies for thread testing,		
33	0504/18	SATM test threads,		
34	06/04/18	System testing guidelines,		
35	07/04/18	ASF (Atomic System Functions) testing example.		
36	11/04/18	Context of interaction, A taxonomy of interactions,		
37	12/04/18	Interaction, composition, determinism, Client/Server Testing,.		
38	19/04/18	**Unit – 6: Process Framework:** Validation and verification,		
39	20/04/18	Degrees of freedom, Varieties of software.		
40	21/04/18	Basic principles: Sensitivity, redundancy,		
41	25/04/18	restriction, partition, visibility, Feedback.		
42	26/04/18	The quality process, Planning and monitoring,		
43	02/05/18	Quality goals, Dependability properties, Analysis,		
44	03/05/18	Testing, Improving the process, Organizational factors.		
45	04/05/18	**Unit – 7: Fault-Based Testing, Test Execution:** Overview, Assumptions in faultbased testing,		
46	05/05/18	Mutation analysis, Fault-based adequacy criteria,		
47	09/05/18	Variations on mutation analysis.		
48	10/05/18	Test Execution: Overview, from test case specifications to test cases,		
49	11/05/18	Scaffolding, Generic versus specific scaffolding, Test oracles,		
50	12/05/18	Self-checks as oracles, Capture and replay.		
51	17/05/18	**Unit – 8: Planning and Monitoring the Process, Documenting Analysis and Test:** Quality and process,		
52	18/05/18	Test and analysis strategies and plans, Risk planning,		
53	19/05/18	Monitoring the process, Improving the process,		
54	23/05/18	The quality team, Organizing documents, Analysis and test plan,		
55	24/05/18	Test design specifications documents, Test and analysis reports.		
56	25/05/18	Revision		
57	26/05/18	Revision		

TEXT BOOKS:

1. Paul C. Jorgensen: Software Testing, A Craftsman's Approach, 3rd Edition, Auerbach Publications, 2008. (Listed topics only from Chapters 1, 2, 5, 6, 7, 9, 10, 12, 1314, 15)
2. Mauro Pezze, Michal Young: Software Testing and Analysis – Process, Principles and Techniques, Wiley India, 2009. (Listed topics only from Chapters 2, 3, 4, 16, 17, 20, 24)

REFERENCE BOOKS:

1. Aditya P Mathur: Foundations of Software Testing, Pearson Education, 2008.
2. Srinivasan Desikan, Gopalaswamy Ramesh: Software Testing Principles and Practices, 2nd Edition, Pearson Education, 2007.
3. Brian Marrick: The Craft of Software Testing, Pearson Education, 1995

[Mr. Chethan M S]
Staff Incharge

[Prof. C V Shanmukaswamy]
HOD, CSE
H.O.D.
Dept. of C.S. & E.,
SIET, TUMKUR-6.

[Dr. H B Phani Raju]
Principal
PRINCIPAL
SIET, TUMAKURU

SHRIDEVI

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-2018 (Even Semester)

COURSE PLAN

***Cover Page*: Course Overview**
***Semester* : VIII** **Year: 2017-2018**

Course Title: System Simulation and Modeling	Course Code: **10CS82**
Total contact Hours: 56	Duration of Exam: 03 Hrs.
Total exam marks: 100	Total I.A. marks: 25
Course plan author: Mr.Venugopal D	Date: 30-01-2018
Checked by: Prof. C.V Shanmuka Swamy	Date: 31-01-2018

Objective:
This course will provide a

1. Comprehensive coverage on system modeling, statistical theory
2. Programming skills which are essential for carrying out simulation.
3. Main topics on statistical theory will be illustrated with modeling and simulation exercises. Simulating with a general computer language and a simulation package

Outcomes:
Establish an unambiguous, common vocabulary to discuss modeling and simulation

1. Identify general characteristics of models
2. Identify characteristics of simulations
3. Determine under which circumstances simulations are useful in engineering?

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Name of the Staff: Mr.Venugopal D **Course Code:** 10CS82

Course Name: System Simulation and Modeling **Class:** VIII SEM

Sl. No.	DATE		Executed Portion	Remarks
1.	01/02/2018	**Unit-1: Introduction to simulation** When simulation is the appropriate tool, when simulation is not appropriate tool, Advantages and Disadvantages of simulation.		
2.	02/02/2018	Areas of Application, Systems and System Environment, Components of a System, Discrete and Continuous Systems.		
3.	03/02/2018	Model of a System.		
4.	07/02/2018	Types of Models, Discrete-Event System Simulation, Steps in a Simulation Study.		
5.	08/02/2018	**Simulation Examples** Characteristics of Queuing System, Queuing Notation		
6.	09/02/2018	Simulation of Queuing Systems		
7.	10/02/2018	Simulation of Inventory Systems.		
8.	14/02/2018	Other examples of simulation.		
9.	15/02/2018	**Unit-2: General Principles** Concepts in Discrete-Event simulation		
10.	16/02/2018	The Event-Scheduling / Time Advance Algorithm		
11.	17/02/2018	World Views		
12.	21/02/2018	Manual Simulation Using Event Scheduling		
13.	22/02/2018	List processing, Simulation in Java		
14.	23/02/2018	Simulation in GPSS		
15.	24/02/2018	**Unit-3: Statistical Models in Simulation** Review of terminology and concepts;		
16.	28/02/2018	Useful statistical models;		
17.	01/03/2018	Discrete distributions;		
18.	02/03/2018	Continuous distributions;		
19.	03/03/2018	Poisson process;		
20.	07/03/2018	Empirical distributions.		
21.	08/03/2018	**Unit-4: Queuing Models** Characteristics of queuing systems;		
22.	14/03/2018	Queuing notation;		

23.	15/03/2018	Long-run measures of performance of queuing systems;		
24.	16/03/2018	Steady-state behavior of M/G/1 queue;		
25.	17/03/2018	Steady-state behavior of M/M/1 queue;		
26.	21/03/2018	Networks of queues.		
27.	22/03/2018	Problems on M/G/1 queue, M/M/1 queue.		
28.	23/03/2018	**Unit-5: Random – Number Generation** Properties of Random Numbers,		
29.	24/03/2018	Generation of Pseudo – Random Numbers		
30.	28/03/2018	Techniques for Generating Random Numbers		
31.	31/03/2018	Continuation of Techniques for Generating Random Numbers		
32.	04/04/2018	Tests for Random Numbers.		
33.	05/04/2018	Problems on Random Number Generation Techniques		
34.	06/04/2018	**Random – Variate Generation** Inverse Transform technique		
35.	07/04/2018	Acceptance – Rejection Technique, Special properties		
36.	11/04/2018	Problems on Uniform, Triangular, Emperical etc…		
37.	12/04/2018	**Unit-6: Input Modeling** Data Collection, Identifying the Distribution with Data		
38.	19/04/2018	Parameter Estimation		
39.	21/04/2018	Goodness of Fit Tests		
40.	25/04/2018	Fitting a non-stationary Poisson process		
41.	25/04/2018	Selecting Input Models without Data		Extra Class
42.	26/04/2018	Multivariate and Time Series Input Models		
43.	26/04/2018	**Chapter 7: Output Analysis For a Single Model** Types of Simulation with respect to output analysis		Extra Class
44.	02/05/2018	Stochastic Nature of Output Data		
45.	02/05/2018	Measures of Performance and their Estimation		Extra Class
46.	03/05/2018	Continuation of Measures of Performance and their Estimation		
47.	03/05/2018	Output Analysis for Terminating Simulations		Extra Class
48.	04/05/2018	Output Analysis for Steady-state Simulations		
49.	04/05/2018	**Unit-8: Verification and Validation or Simulation Models, Optimization** Model Building		Extra Class
50.	05/05/2018	Verification And Validation		
51.	09/05/2018	Verification of Simulation Model		
52.	10/05/2018	Calibration And Validation of Models		

53.	11/05/2018	Optimization, simulation		
54.	12/05/2018	,Optimization via simulation		
55.	25/05/2018	Revision		
56.	26/05/2018	Solutions for VTU Question Paper Problems		

Text Books:

1. Discrete Event System Simulation: Jerry Banks, John S Carson II, Barry L Nelson, David M Nicol, 5th Edition Pearson Education, 2010.

Reference Books:

1. Lawrence M.Leemis, Stephen K.Park: Discrete-Event Simulation: A First course, Pearson Education, 2006.

2. Averill M.Law: Simulation Modeling and Analysisi, 4th Edition, Tata McGraw-Hill, 2007.

[Mr.Venugopal D]	[Prof. C V Shanmuka Swamy]	[Dr.H B Phani Raju]
Staff-Incharge	**Head, Dept of CSE**	**Principal**

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Sri Shridevi Charitable Trust (R.)
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Sira Road, Tumkur - 572 106, Karnataka, India.
Phone: 0816 - 2213629 | Principal: 0816 - 2212627, 9480124899 | Telefax: 0816 - 2212628
Email: info@shridevieng.org, principal@shridevieng.org | Website: www.shridevieng.org
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Criteria 1.1

Curriculum Planning and Implementation

Lesson Plans (CSE)

2018 – 2023

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY, TUMKUR-06
(An ISO 9001-2008 Certified Institution)
DEPARTMENT OF MATHEMATICS
Academic Year 2018-19(Odd semester)

LECTURE PLAN

Name of the Staff: Dr.CHETANA C
Class: III semester
Subject: Engg. Mathematics-III

Department: Mathematics
Section: CSE+ISE
Subject code: 17MAT31

Course Learning Objectives:

The objectives of this course is to introduce students to the mostly used analytical and numerical methods in the different engineering fields by making them to learn Fourier series,Fourier transforms and Z-transforms, statistical methods, numerical methods to solve algebraic and transcendental equations, vector integration and calculus of variation.

Sl No	DATE	TOPICS	REMARKS
		MODULE-1 : FOURIER SERIES	
1	2/8/2018	Periodic functions	Covered
2	3/8/2018	Dirichlet's conditions	Covered
3	6/8/2018	Fourier series of Periodic functions with period 2π	Covered
4	7/8/2018	Problems continued	Covered
5	9/8/2018	Fourier series of Periodic functions with arbitrary 2c	Covered
6	10/8/2018	Problems continued	Covered
7	13/8/2018	Fourier series of even and odd functions	Covered
8	14/8/2018	Problems continued	Covered
9	16/8/2018	Half range Fourier series expansion, Problems	Covered
10	17/8/2018	Problems continued	Covered
11	20/8/2018	Practical Harmonic Analysis: Problems	Covered
12	21/8/2018	Problems continued	Covered
13	23/8/2018	Revision	Covered
		MODULE-2: FOURIER TRANSFORMS AND Z-TRANSFORMS	
14	24/8/2018	**Fourier Transform:** Infinite Fourier transform and problems	Covered
15	27/8/2018	Problems continued	Covered
16	28/8/2018	Fourier Sine and Cosine transforms	Covered
17	30/8/2018	Problems continued	Covered
18	31/8/2018	Inverse Fourier transforms	Covered
19	3/9/2018	Inverse Fourier Sine and Cosine transforms	Covered
20	4/9/2018	Problems continued	Covered
21	6/9/2018	**Z-transforms:** Difference equations – basic definitions, Z- Transforms-definition, standard forms	Covered
22	7/9/2018	Damping rule, shifting rule	Covered
23	10/9/2018	Initial value and Final value theorems(without proof) and problems	Covered

24	11/9/2018	Inverse Z-transforms and problems	Covered
25	14/9/2018	Application of Z-transforms to solve difference equations	Covered
26	17/9/2018	Problems continued and Revision	Covered
MODULE-3: STATISTICAL METHODS, CURVE FITTING , NUMERICAL METHODS			
27	18/9/2018	**Statistical methods**: review of measures of central tendency and dispersion.	Covered
28	25/9/2018	Correlation-Karl Pearson's coefficient of Correlation-Problems	Covered
29	27/9/2018	Regression analysis	Covered
30	28/9/2018	Lines of Regression(without proof) -Problems	Covered
31	1/10/2018	**Curve fitting** : Curve fitting by the method of least squares	Covered
32	4/10/2018	Fitting of the curves of the form $y = ax + b$, $y = ax^2 + bx + c$	Covered
33	5/10/2018	Fitting of the curves of the form $y = ae^{bx}$	Covered
34	9/10/2018	**Numerical Methods**: Numerical solutions of algebraic and transcendental equations	Covered
35	11/10/2018	Regula-Falsi method and Problems	Covered
36	12/10/2018	Newton-Raphson method and Problems	Covered
37	15/10/2018	Problems Continued and Revision	Covered
MODULE-4: FINITE DIFFERENCES , NUMERICAL INTEGRATION			
38	16/10/2018	Finite differences: Forward and backward Differences	Covered
39	18/10/2018	Newton-Gregory forward difference interpolation formula and Problems	Covered
40	22/10/2018	Newton-Gregory backward difference interpolation formula and Problems	Covered
41	23/10/2018	Newton's divided difference interpolation formula and Problems	Covered
42	25/10/2018	Lagrange's interpolation formula and Problems	Covered
43	26/10/2018	**Numerical integration** : Simpson's one third rule,	Covered
44	2/11/2018	Simpson's three- eighth rule and Weddle's rule(without proof) and Problems	Covered
45	5/11/2018	Revision	Covered
MODULE-5: VECTOR INTEGRATION, CALCULUS OF VARIATIONS			
46	9/11/2018	**Vector integration**: Line integrals- definition and problems	Covered
47	12/11/2018	Surface and volume integrals- definitions and problems	Covered
48	13/11/2018	Green's theorem (without proof) in a plane and problems	Covered
49	15/11/2018	Stoke's theorem (without proof) and problems	Covered
50	16/11/2018	Gauss-divergence theorem (without proof) and problems	Covered
51	19/11/2018	**Calculus of variations:** Variation of function and Functional	Covered
52	20/11/2018	Variational problems	Covered
53	22/11/2018	Euler's equation and problems	Covered
54	23/11/2018	Geodesic's and problems	Covered

55	30/11/2018	Hanging chain problems and Revision	

Course outcomes: On completion of this course, students are able to,

CO1: Know the use of periodic signals and Fourier series to analyze circuits and system communications

CO2: Explain the general linear system theory for continuous-time signals and digital signal processing using the Fourier Transform and Z-Transform.

CO3: Employ appropriate numerical methods to solve algebraic and transcendental equations.

CO4: Apply Green's Theorem, Divergence Theorem and Stoke's Theorem in various applications in the field of electro-magnetic and gravitational fields and fluid flow problems.

CO5: Determine the externals of functional and solve the simple problems of the calculus of variations.

Text Books:

1. Higher Engineering Mathematics by B.S.Grewal
2. Advanced Engineering Mathematics by E. Kreszig VI edition

Reference Books:

1. Engineering Mathematics by N.P. Bali and Manish Goyal
2. Higher Engineering Mathematics by B.V. Ramana
3. Higher Engineering Mathematics by H. K. Dass & Er.RajnishVerma

30/11/2018

(Dr. Chetana C)
Staff in charge

30/11/2018

(Dr. Chetana C)
HOD

(Dr. Hemadri Naidu T)
PRINCIPAL

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TUMKUR - 572106

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester: III Semester **Year: 2018-19**

Course : **Analog and Digital Electronics**	*Course Code:* **17CS32**
Total contact Hours: **57**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **60**	*Total I.A. marks:* **40**
Lesson plan author: **Mr. Mallesh H.L**	*Date:* **31/07/2018**
Checked by: **Prof C.V Shanmukaswamy**	*Date:* **31/07/2018**

Course objectives: This course will enable students to
- Recall and Recognize construction and characteristics of JFETs and MOSFETs.
- Describe, Differentiate and Apply JFETs and MOSFETs
- Define, Demonstrate and Analyse Operational Amplifier circuits and their applications
- Describe, Illustrate and Analyse Combinational Logic circuits, Simplification of Algebraic Equations using Karnaugh Maps and Quine McClusky Techniques.
- Define, Describe and Design Decoders, Encoders, Digital multiplexers, Adders and Subtractors, Binary comparators, Latches and Master-Slave Flip-Flops.
- Describe, Demonstrate, Analyse and Design Synchronous and Asynchronous Sequential Circuits, State diagrams, Registers and Counters, A/D and D/A converters.

Course outcome:
- Acquire knowledge of
  - JFETs and MOSFETs , Operational Amplifier circuits and their applications
  - Combinational Logic, Simplification Techniques using Karnaugh Maps, Quine McClusky Technique.
  - Operation of Decoders, Encoders, Multiplexers, Adders and Subtractors.
  - Working of Latches, Flip-Flops, Designing Registers, Counters, A/D and D/A Converters
- Analyse the performance of
  - JFETs and MOSFETs , Operational Amplifier circuits
  - Simplification Techniques using Karnaugh Maps, Quine McClusky Technique.
  - Synchronous and Asynchronous Sequential Circuits.
- Apply the knowledge gained in the design of Counters, Registers and A/D & D/A converters

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LECTURE PLAN

Name of the Staff: Mr. Mallesh H.L. **Course Code:** 17CS32

Class: III SEM **Course:** Analog and Digital Electronics

Sl. No.	DATE	TOPIC	TOPICS COVERED	REMARKS
01	01/08/2018	**Module -1 Field Effect Transistors**: Junction Field Effect Transistors	Covered	
02	03/08/2018	MOSFETs, Differences between JFETs and MOSFETs	Covered	
03	04/08/2018	Biasing MOSFETs, FET Applications	Covered	
04	07/08/2018	CMOS Devices. Wave-Shaping Circuits: Integrated Circuit(IC) Multivibrators	Covered	
05	08/08/2018	**Introduction to Operational Amplifier**: Ideal v/s practical Opamp	Covered	
06	10/08/2018	Performance Parameters	Covered	
07	11/08/2018	**Operational Amplifier Application Circuits:**Peak Detector Circuit	Covered	
08	14/08/2018	Comparator	Covered	
09	17/8/2018	Active Filters, Non-Linear Amplifier	Covered	
10	18/08/2018	Relaxation Oscillator	Covered	
11	21/08/2018	Current-To-Voltage Converter,	Covered	
12	24/08/2018	Voltage-To-Current Converter.	Covered	
13	25/08/2018	**Module -2 The Basic Gates:** Review of Basic Logic gates,	Covered	
14	28/08/2018	Positive and Negative Logic,Introduction to HDL	Covered	
15	29/08/2018	**Combinational Logic Circuits:** Sum-of-Products Method	Covered	
16	31/08/2018	Truth Table to Karnaugh Map, Pairs Quads, and Octets,	Covered	

17	1/09/2018	Karnaugh Simplifications	Covered	
18	4/09/2018	Don't-care Conditions, Product-of-sums Method	Covered	
19	5/09/2018	Product-of -sums simplifications	Covered	
20	07/09/2018	Simplification by Quine-McCluskyMethod	Covered	
21	08/09/2018	Hazards and Hazard covers	Covered	
22	11/09/2018	HDL Implementation Models.	Covered	
23	12/09/2018	Revision and Question Paper Solving	Covered	
24	14/09/2018	**Module – 3 Data-Processing Circuits:** Multiplexers	Covered	
25	15/09/2018	Demultiplexers, 1-of-16 Decoder	Covered	
26	18/09/2018	BCD to Decimal Decoders, Seven Segment Decoders	Covered	
27	19/09/2018	Encoders, Exclusive-OR Gates	Covered	
28	25/09/2018	Parity Generators and Checkers, Magnitude Comparator	Covered	
29	26/09/2018	Programmable Array Logic, Programmable Logic Arrays	Covered	
	28/09/2018	HDL Implementation of Data Processing Circuits	Covered	
31	29/09/2018	Arithmetic Building Blocks, Arithmetic Logic Unit	covered	
32	3/10/2018	**Flip-Flops:** RS Flip-Flops	covered	
33	5/10/2018	Gated Flip-Flops	covered	
34	6/10/2018	Edge-triggered RS FLIP-FLOP	Covered	
35	9/10/2018	Edge triggered D FLIP-FLOPs, Edge-triggered JK FLIP-FLOPs	Covered	
36	10/10/2018	**Module-4 Flip- Flops:** FLIP-FLOP Timing	covered	
37	12/10/2018	JK Master-slave FLIP-FLOP	covered	
38	13/10/2018	Switch Contact Bounce Circuits	covered	
39	16/10/2018	Various Representation of FLIP-FLOPs	covered	
	17/10/2018	HDL Implementation of FLIP-FLOP.	covered	
41	20/10/2018	**Registers:** Types of Registers, Serial In - Serial Out	covered	
42	23/10/2018	Serial In -Parallel out, Parallel In - Serial Out, Parallel In - Parallel Out	covered	
43	26/10/2018	Universal Shift Register	covered	
44	27/10/2018	Applications of Shift Registers, Register implementation in HDL.	covered	
45	2/11/2018	**Counters:** Asynchronous Counters, Decoding Gates	covered	

46	03/11/2018	Synchronous Counters	Covered	
47	07/11/2018	Changing the Counter Modulus.	covered	
48	9/11/2018	Module-5 Counters: Decade Counters	covered	
49	10/11/2018	Pre settable Counters	covered	
50	13/11/2018	Counter Design as a Synthesis problem	covered	
51	14/11/2018	A Digital Clock, Counter Design using HDL.	covered	
52	16/11/2018	D/A Conversion and A/D Conversion: Variable, Resistor Networks	covered	
53	17/11/2018	Binary Ladders	covered	
54	20/11/2018	D/A Converters, D/A Accuracy and Resolution A/D Converter- Simultaneous Conversion	covered	
55	23/11/2018	A/D Converter-Counter Method Continuous A/D Conversion	covered	
56	24/11/2018	A/D Techniques Dual-slope A/D Conversion	covered	
57	30/11/2018	A/D Accuracy and Resolution.	covered	

Text Books:

1. Anil K Maini, Varsha Agarwal: Electronic Devices and Circuits, Wiley, 2012.
2. Donald P Leach,Albert Paul Malvino & Goutam Saha: Digital Principles and Applications, 8th Edition, Tata McGraw Hill, 2015

Reference Books:

1. Stephen Brown, ZvonkoVranesic: Fundamentals of Digital Logic Design with VHDL, 2nd Edition, Tata McGraw Hill, 2005.
2. R D Sudhaker Samuel: Illustrative Approach to Logic Design, Sanguine-Pearson, 2010.
3. M Morris Mano: Digital Logic and Computer Design, 10th Edition, Pearson, 2008.

[Mr.Mallesh H.L]
Staff Incharge

[Prof. C V Shanmukaswamy]
Head, Dept of CSE

[Dr. T Hemadri Naidu]
Principal

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TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: Course Overview
Semester: III Semester **Year: 2018-19**

Course Title: DATA STRUCTURES AND APPLICATIONS	Course Code: **17CS33**
Total contact Hours: **55**	Duration of Exam: 03 Hrs.
Total exam marks: **60** [100 Reduced to 60]	Total I.A. marks: **40**
Lesson plan author: **Ms. Yashaswini HS**	Date:31 /07/2018
Checked by: **Prof. C.V.Shanmuka swamy**	Date: 31/07/2018
CREDITS – 04	

Prerequisites:
knowledge of basic concepts of C programming language.

Objectives:This course will enable students to

- Explain fundamentals of data structures and their applications essential for programming/problem
- solving
- Analyze Linear Data Structures: Stack, Queues, Lists
- Analyze Non-Linear Data Structures: Trees, Graphs
- Analyze and Evaluate the sorting & searching algorithms
- Assess appropriate data structure during program development/Problem Solving

Outcomes: After studying this course, students will be able to:

- Acquire knowledge of
  - Various types of data structures, operations and algorithms.
  - Sorting and searching operations.
  - File structures.
- Analyse the performance of
  - Stack, Queue, Lists, Trees, Graphs, Searching and Sorting techniques.
- Implement all the applications of Data structures in a high-level language.
- Design and apply appropriate data structures for solving computing problems.

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2018-19 (Odd Sem)
Department of Computer Science & Engg.

LECTURE PLAN

Staff: Ms. Yashaswini HS
Course: DATA STRUCTURES AND APPLICATIONS

Class : III semester,
Course Code : 17CS33

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		Module 1:Introduction		
1	02/08/2018	Data Structures, Classifications (Primitive & Non Primitive), Data structure Operations	Covered	
2	04/08/2018	Review of Arrays, Structures,	Covered	
3	06/08/2018	Self-Referential Structures, and Unions.	Covered	
4	07/08/2018	Pointers and Dynamic Memory Allocation Functions.	Covered	
5	09/08/2018	Representation of Linear Arrays in Memory, Dynamically allocated arrays	Covered	
6	11/08/2018	**Array Operations**: Traversing, inserting, deleting, searching, and sorting	Covered	
7	13/08/2018	Multidimensional Arrays, Polynomials	Covered	
8	14/08/2018	Sparse Matrices.	Covered	
9	16/08/2018	**Strings:** Basic Terminology, Storing,	Covered	
10	18/08/2018	Operations and Pattern Matching algorithms.	Covered	
11	20/08/2018	Programming Examples	Covered	
12	21/08/2018	Programming Examples	Covered	
13	23/08/2018	Programming Examples	Covered	
		Module 2: Stacks and Queues		
14	25/08/2018	**Stacks:** Definition, Stack Operations, Array Representation of Stacks	Covered	
15	27/08/2018	Stacks using Dynamic Arrays, Stack Applications: Polish notation,	Covered	
16	28/08/2018	Infix to postfix conversion, evaluation of postfix expression.	Covered	
17	30/08/2018	**Recursion** - Factorial, GCD, Fibonacci Sequence,	Covered	
18	01/09/2018	Tower of Hanoi, Ackerman's function.	Covered	
19	03/09/2018	**Queues:** Definition, Array Representation, Queue Operations,	Covered	
20	04/09/2018	Circular Queues, Circular queues using Dynamic arrays,	Covered	
21	06/09/2018	Dequeues, Priority Queues,	Covered	
22	08/09/2018	A Mazing Problem. Multiple Stacks and Queues.	Covered	
23	10/09/2018	Programming Examples	Covered	
		Module 3: Linked Lists		
24	11/09/2018	**Linked Lists**: Definition, Representation of linked lists in Memory,	Covered	
25	15/09/2018	Memory allocation, Garbage Collection	Covered	
26	17/09/2018	Linked list operations: Traversing, Searching, Insertion, and Deletion.	Covered	
27	18/09/2018	Linked list operations: Traversing, Searching, Insertion, and Deletion contd.,	Covered	
28	25/09/2018	Doubly Linked lists	Covered	
29	27/09/2018	Contd... Doubly Linked lists	Covered	
30	29/09/2018	Circular linked lists, Header linked lists	Covered	
31	01/10/2018	Linked Stacks and Queues.	Covered	

32	04/10/2018	Applications of Linked lists		
33	06/10/2018	Programming Examples		
34	09/10/2018	Programming Examples		
35	11/10/2018	Programming Examples		
		Module-4 Trees:		
36	13/10/2018	**Trees**:Terminology, Binary Trees, Properties of Binary trees,		
37	15/10/2018	Array and linked Representation of Binary Trees,		
38	16/10/2018	Array and linked Representation of Binary Trees, Contd.,		
39	20/10/2018	Binary Tree Traversals - Inorder, postorder, preorder		
40	22/10/2018	Additional Binary tree operations.		
41	23/10/2018	Threaded binary trees,		
42	25/10/2018	Binary Search Trees – Definition,		
43	27/10/2018	Insertion, Deletion, Traversal,		
44	03/11/2018	Searching, Application of Trees, Evaluation of Expression,		
45	05/11/2018	Programming Examples		
		Module-5 Graphs		
46	06/11/2018	**Graphs**: Definitions, Terminologies, Matrix and Adjacency List Representation OfGraph		
47	10/11/2018	Elementary Graph operations, Traversal methods		
48	12/11/2018	Breadth First Search and Depth First Search.		
49	13/11/2018	**Sorting and Searching**: Insertion Sort, Radix sort,		
50	15/11/2018	Address Calculation Sort.		
51	17/11/2018	**Hashing:** Hash Table organizations, Hashing Functions,		
52	19/11/2018	Static and Dynamic Hashing.		
53	20/11/2018	**Files and Their Organization:** Data Hierarchy, File Attributes, Text Files and BinaryFiles		
54	22/11/2018	Basic File Operations, File Organizations and Indexing		
55	24/11/2018	Model Question Paper Discussion		

Text Books:

1. Fundamentals of Data Structures in C - **Ellis Horowitz and Sartaj Sahni**, 2nd edition, Universities Press,2014
2. Data Structures - **Seymour Lipschutz, Schaum's Outlines**, Revised 1st edition, McGraw Hill, 2014

Reference Books:

1. Data Structures: A Pseudo-code approach with C -Gilberg & Forouzan, 2nd edition, Cengage Learning,
2014.
2. Data Structures using C, , Reema Thareja, 3rd edition Oxford press, 2012.
3. An Introduction to Data Structures with Applications- **Jean-Paul Tremblay & Paul G. Sorenson**, 2nd Edition, McGraw Hill, 2013.
4. Data Structures using C - A M Tenenbaum, PHI, 1989.
5. Data Structures and Program Design in C - Robert Kruse, 2nd edition, PHI, 1996.

[Ms. Yasharwini HS]
Staff In-charge

[Prof. C.V. ShanmukaSwamy]
Head, Dept of ISE

[Dr. Hemadri Naidu T.]
Principal

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BHOJA INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMAKUR - 572106.

SHRIDEVI

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2016-17 (Odd Sem)
Department of Computer Science & Engg.

LECTURE PLAN

Staff: Prof. C.V.Shanmuka Swamy
Course: DATA STRUCTURES AND APPLICATIONS

Class : III semester,
Course Code : 17CS33

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		Module 1:Introduction		
1	02/08/2018	Data Structures, Classifications (Primitive & Non Primitive), Data structure Operations		
2	04/08/2018	Review of Arrays, Structures,		
3	06/08/2018	Self-Referential Structures, and Unions.		
4	07/08/2018	Pointers and Dynamic Memory Allocation Functions.		
5	09/08/2018	Representation of Linear Arrays in Memory, Dynamically allocated arrays		
6	11/08/2018	**Array Operations**: Traversing, inserting, deleting, searching, and sorting		
7	13/08/2018	Multidimensional Arrays, Polynomials		
8	14/08/2018	Sparse Matrices.		
9	16/08/2018	**Strings**: Basic Terminology, Storing,		
10	18/08/2018	Operations and Pattern Matching algorithms.		
11	20/08/2018	Programming Examples		
12	21/08/2018	Programming Examples		
13	23/08/2018	Programming Examples		
		Module 2: Stacks and Queues		
14	25/08/2018	**Stacks**: Definition, Stack Operations, Array Representation of Stacks		
15	27/08/2018	Stacks using Dynamic Arrays, Stack Applications: Polish notation,		
16	28/08/2018	Infix to postfix conversion, evaluation of postfix expression,		
17	30/08/2018	**Recursion** - Factorial, GCD, Fibonacci Sequence,		
18	01/09/2018	Tower of Hanoi, Ackerman's function.		
19	03/09/2018	**Queues:** Definition, Array Representation, Queue Operations,		
20	04/09/2018	Circular Queues, Circular queues using Dynamic arrays,		
21	06/09/2018	Dequeues, Priority Queues,		
22	08/09/2018	A Mazing Problem. Multiple Stacks and Queues.		
23	10/09/2018	Programming Examples		
		Module 3: Linked Lists		
24	11/09/2018	**Linked Lists** Definition, Representation of linked lists in Memory,		
25	15/09/2018	Memory allocation, Garbage Collection		
26	17/09/2018	Linked list operations: Traversing, Searching, Insertion, and Deletion.		
27	18/09/2018	Linked list operations: Traversing, Searching, Insertion, and Deletion contd.,		
28	25/09/2018	Doubly Linked lists		
29	27/09/2018	Contd… Doubly Linked lists		
30	29/09/2018	Circular linked lists, Header linked lists		
31	01/10/2018	Linked Stacks and Queues.		

32	04/10/2018	Applications of Linked lists	
33	06/10/2018	Programming Examples	
34	09/10/2018	Programming Examples	
35	11/10/2018	Programming Examples	
		Module-4 Trees:	
36	13/10/2018	**Trees**:Terminology, Binary Trees, Properties of Binary trees,	
37	15/10/2018	Array and linked Representation of Binary Trees,	
38	16/10/2018	Array and linked Representation of Binary Trees, Contd.,	
39	20/10/2018	Binary Tree Traversals - Inorder, postorder, preorder	
40	22/10/2018	Additional Binary tree operations.	
41	23/10/2018	Threaded binary trees,	
42	25/10/2018	Binary Search Trees – Definition,	
43	27/10/2018	Insertion, Deletion, Traversal,	
44	03/11/2018	Searching, Application of Trees, Evaluation of Expression,	
45	05/11/2018	Programming Examples	
		Module-5 Graphs	
46	06/11/2018	**Graphs**: Definitions, Terminologies, Matrix and Adjacency List Representation OfGraph	
47	10/11/2018	Elementary Graph operations, Traversal methods	
48	12/11/2018	Breadth First Search and Depth First Search.	
49	13/11/2018	**Sorting and Searching**: Insertion Sort, Radix sort,	
50	15/11/2018	Address Calculation Sort.	
51	17/11/2018	**Hashing:** Hash Table organizations, Hashing Functions,	
52	19/11/2018	Static and Dynamic Hashing.	
53	20/11/2018	**Files and Their Organization:** Data Hierarchy, File Attributes, Text Files and BinaryFiles	
54	22/11/2018	Basic File Operations, File Organizations and Indexing	
55	24/11/2018	Model Question Paper Discussion	

Text Books:

1. Fundamentals of Data Structures in C - **Ellis Horowitz and Sartaj Sahni**, 2nd edition, Universities Press,2014
2. Data Structures - **Seymour Lipschutz, Schaum's Outlines**, Revised 1st edition, McGraw Hill, 2014

Reference Books:

1. Data Structures: A Pseudo-code approach with C –Gilberg & Forouzan, 2nd edition, Cengage Learning, 2014.
2. Data Structures using C, , Reema Thareja, 3rd edition Oxford press, 2012.
3. An Introduction to Data Structures with Applications- **Jean-Paul Tremblay & Paul G. Sorenson**, 2nd Edition, McGraw Hill, 2013.
4. Data Structures using C - A M Tenenbaum, PHI, 1989.
5. Data Structures and Program Design in C - Robert Kruse, 2nd edition, PHI, 1996.

[Prof. C.V.ShanmukaSwamy]
Staff In-charge

[Prof. C.V.ShanmukaSwamy]
Head, Dept of CSE

[Dr. Hemadri Naidu T.]
Principal

PRINCIPAL
BHRDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

COURSE LECTURE PLAN

Cover Page: **Course Overview**
Semester : **III** **Year: 2018-2019**

Course Title: **Computer Organization**	*Subject Code:* **17CS34**
Total contact Hours: 66	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
Lesson plan author: Mr. Chethan M S	*Date:* 01/08/2018
Checked by: Prof. C V Shanmukaswamy	*Date:* 01/08/2018

Course objectives:
This course will enable students to

- Understand the basics of computer organization: structure and operation of computers and their peripherals.
- Understand the concepts of programs as sequences or machine instructions.
- Expose different ways of communicating with I/O devices and standard I/O interfaces.
- Describe hierarchical memory systems including cache memories and virtual memory.
- Describe arithmetic and logical operations with integer and floating-point operands.
- Understand basic processing unit and organization of simple processor, concept of pipelining and other large computing systems.

Course outcomes:
After studying this course, students will be able to:

- Acquire knowledge of
  - The basic structure of computers & machine instructions and programs, Addressing Modes, Assembly Language, Stacks, Queues and Subroutines.
  - Input/output Organization such as accessing I/O Devices, Interrupts.
  - Memory system basic Concepts, Semiconductor RAM Memories, Static memories, Asynchronous DRAMS, Read Only Memories, Cache Memories and Virtual Memories.
  - Some Fundamental Concepts of Basic Processing Unit, Execution of a Complete Instruction, Multiple Bus Organization, Hardwired Control and Micro programmed Control.
  - Pipelining, embedded and large computing system architecture.
- Analyse and design arithmetic and logical units.
- Apply the knowledge gained in the design of Computer.
- Design and evaluate performance of memory systems
- Understand the importance of life-long learning.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remar
01	01/08/18	**MODULE-1. Basic Structure of Computers:** Basic Operational Concepts, Bus Structures,		
02	02/08/18	Performance – Processor Clock, Basic Performance Equation,		
03	03/08/18	Clock Rate, Performance Measurement		
04	06/08/18	**Machine Instructions and Programs:** Memory Location and Addresses		
05	07/08/18	Memory Operations, Instructions and Instruction Sequencing		
06	08/08/18	Instructions and Instruction Sequencing Continue.....		
07	09/08/18	Addressing Modes,		
08	10/08/18	Addressing Modes Continue.....		
09	13/08/18	Assembly Language, Basic Input and Output Operations		
10	14/08/18	Basic Input and Output Operations Contd., Stacks and Queues,		
11	16/08/18	Stacks and Queues Contd.....		
12	17/08/18	Subroutines, Additional Instructions		
13	20/08/18	Additional Instructions Contd..., Encoding of Machine Instructions		
14	21/08/18	Encoding of Machine Instructions Contd.....		
15	23/08/18	**MODULE-2. Input/output Organization:** Accessing I/O Devices		
16	24/08/18	Interrupts – Interrupt Hardware		
18	27/08/18	Enabling and Disabling Interrupts		
18	28/09/18	Handling Multiple Devices		
19	29/08/18	Controlling Device Requests, Exceptions,		
20	30/08/18	Direct Memory Access, Buses		
21	31/08/18	Buses Contd.....		
22	03/09/18	Interface Circuits		
23	04/09/18	Interface Circuits Contd.,		
24	05/09/18	Standard I/O Interfaces		
25	06/09/18	Standard I/O Interfaces Contd., PCI Bus		
26	07/09/18	Standard I/O Interfaces Contd., SCSI Bus		
27	10/09/18	SCSI Bus Contd., USB		
28	11/09/16	USB continued...		
29	12/09/18	USB continued...		
30	14/09/18	**MODULE-3. Memory System :** Basic concepts,		
31	17/09/18	Semiconductor RAM Memories		
32	18/09/18	Read Only Memories, Speed, Size, and Cost		
33	19/09/18	Read Only Memories, Speed, Size, and Cost Continued...		
34	25/09/18	Cache Memories-Mapping functions		
35	26/09/18	Cache Memories-Mapping functions Continued....		
36	27/09/18	Replacement Algorithms,		
37	28/09/18	Replacement Algorithms,		

38	01/10/18	Performance Considerations	
39	03/10/18	Virtual Memories	
40	04/10/18	Virtual Memories Continued.....	
41	05/10/18	Secondary Storage	
42	09/10/18	**MODULE-4. Arithmetic:** Numbers, Arithmetic Operations and Characters	
43	10/10/18	Arithmetic Operations and Characters Continued...	
44	11/10/18	Addition and Subtraction of Signed Numbers	
45	12/10/18	Design of Fast Adders	
46	15/1018	Multiplication of Positive Numbers	
47	16/10/18	Signed Operand Multiplication	
48	17/10/18	Fast Multiplication	
49	22/10/18	Fast Multiplication Continued...	
50	23/10/18	Integer Division	
51	25/10/18	Integer Division Continued...	
52	26/10/18	Floating-point Numbers and Operations	
53	02/11/18	**MODULE-5. Basic Processing Unit** Some Fundamental Concepts	
54	05/11/18	Some Fundamental Concepts Continued.....	
55	07/11/18	Execution of a Complete Instruction	
56	09/11/18	Multiple Bus Organization	
57	12/11/18	Hard-wired Control	
58	13/11/18	Micro programmed Control	
59	14/11/18	**Embedded System and Large Computer Systems:** Examples of Embedded Systems	
60	15/11/18	Processor chips for embedded applications, Simple Microcontroller.	
61	16/11/18	**The Structure of General-Purpose Multiprocessors**	
62	19/11/18	Question Paper Discussion	
63	20/11/18	Question Paper Discussion	
64	22/11/18	Question Paper Discussion	
65	2311/18	Question Paper Discussion	
66	30/11/18	Question Paper Discussion	

Text Books:

1. Carl Hamacher, Zvonko Vranesic, Safwat Zaky: Computer Organization, 5th Edition, Tata McGraw Hill, 2002.

Reference Books:

1. William Stallings: Computer Organization & Architecture, 9th Edition, Pearson, 2015

Mr. Chethan M S
Staff Incharge

Prof. C V Shantmukaswamy
Head, Dept of CSE

Dr. Hemadri Naidu T
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

COURSE LECTURE PLAN

Semester: III **Year: 2018-2019**

Course Title: UNIX AND SHELL PROGRAMMING	Course Code: 17CS35
Total contact Hours: 62	Duration of Exam: 03 Hrs.
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Mr Renukaradhya P C	Date: 30/07/2018
Checked by: Prof. C V Shanmuka Swamy	Date: 30/07/2018

OBJECTIVES

This course will enable students to

- Understand the UNIX Architecture, File systems and use of basic Commands.
- Use of editors and Networking commands.
- Understand Shell Programming and to write shell scripts.
- Understand and analyze UNIX System calls, Process Creation, Control Relationship.

OUTCOMES

- Explain UNIX system and use different commands.
- Compile Shell scripts for certain functions on different subsystems.
- Demonstrate use of editors and Perl script writing.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SL No	DATE	TOPIC NAMES	TOPICS COVERED	REMARKS
1	01-08-18	**Module-1:** Introduction, Brief history. Unix Components/Architecture. Features of Unix.	Covered	
2	02-08-18	The UNIX Environment and UNIX Structure, Posix and Single Unix specification.	Covered	
3	04-08-18	The login prompt. General features of Unix commands/ command structure	Covered	
4	06-08-18	Command arguments and options	Covered	
5	08-08-18	Understanding of some basic commands such as echo, printf, ls, who, date, passwd, cal,	Covered	
6	09-08-18	Combining commands. Meaning of internal and external commands	Covered	
7	11-08-18	The type command: knowing the type of a command and locating it	Covered	
8	13-08-18	The man command knowing more about Unix commands and using Unix online manual pages.	Covered	
9	16-08-18	The man with keyword option and whatis. The more command and using it with other commands	Covered	
10	18-08-18	Knowing the user terminal, displaying its characteristics and setting characteristics.	Covered	
11	20-08-18	Managing the non-uniform behaviour of terminals and keyboards. The root login.	Covered	
12	23-08-18	Becoming the super user: su command. The /etc/passwd and /etc/shadow files. Commands to add, modify and delete users.	Covered	
13	25-08-18	**Module – 2:** Unix files. Naming files. Basic file types/categories. Organization of files. Hidden files.	Covered	
14	27-08-18	Standard directories. Parent child relationship. The home directory and the HOME variable	Covered	
15	29-08-18	Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames	Covered	
16	30-08-18	Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names	Covered	

17	01-09-18	File related commands – cat, mv, rm, cp, wc and od commands	Covered	
18	03-09-18	File attributes and permissions and knowing them.	Covered	
19	05-09-18	The ls command with options.	covered	
20	06-09-18	Changing file permissions: the relative and absolute permissions	covered	
21	08-09-18	changing methods. Recursively changing file permissions. Directory permissions	Covered	
	10-09-18		C	
22	12-09-18	**Module – 3:** The vi editor. Basics. The .exrc file. Different ways of invoking and quitting vi	covered	
23	15-09-18	Different modes of vi. Input mode commands. Command mode commands. The ex mode commands	Covered	
24	17-09-18	Illustrative examples Navigation commands. Repeat command. Pattern searching.	covered	
25	19-09-18	The search and replace command. The set, map and abbr commands.	Covered	
26	26-09-18	Simple examples using these commands. The shells interpretive cycle	Covered	
27	27-09-18	Wild cards and file name generation. Removing the special meanings of wild cards	Covered	
28	29-09-18	Three standard files and redirection. Connecting commands: Pipe. Splitting the	Covered	
29	01-10-18	output: tee. Command substitution. Basic and Extended regular expressions	covered	
30	03-10-18	The grep, egrep. Typical examples involving different regular expressions.	Covered	
			C	
31	04-10-18	**Module – 4:** Shell programming. Ordinary and environment variables. The .profile. Read and readonly commands	Covered	
32	06-10-18	Command line arguments. exit and exit status of a command.	Covered	
33	10-10-18	Logical operators for conditional execution. The test command and its shortcut	covered	
34	11-10-18	The if, while, for and case control statements.	Covered	
35	13-10-18	The set and shift commands and handling positional parameters	Covered	
36	15-10-18	The here (<<) document and trap command. Simple shell program examples	Covered	
37	17-10-18	File inodes and the inode structure. File links – hard and soft links	covered	

38	20-10-18	Filters. Head and tail commands. Cut and paste commands. The sort command and its usage with different options	Covered	
39	22-10-18	The umask and default file permissions. Two special files /dev/null and /dev/tty	Covered	
40	25-10-18	**Module – 5** Meaning of a process. Mechanism of process creation. Parent and child process. The ps command with its options	Covered	
41	27-10-18	Executing a command at a specified point of time: at command.	Covered	
42	03-11-18	Executing a command periodically: cron command and the crontab file.. Signals	Covered	
43	05-11-18	The nice and nohup commands. Background processes. The bg and fg command. The kill command	Covered	
44	07-11-18	The find command with illustrative example. Structure of a perl script. Running a perl script	Covered	
45	10-11-18	Variables and operators. String handling functions. Default variables - $_ and $. – representing the current line and current line number	Covered	
46	12-11-18	The range operator. Chop() and chomp() functions. Lists and arrays. The @- variable	Covered	
47	12-11-18	The splice operator, push(),	Covered	
48	14-11-18	pop(), split() and join().	Covered	
49	14-11-18	File handles and handling file – using open(), close() and	Covered	
50	15-11-18	die ()functions	Covered	
51	15-11-18	Associative arrays – keys and value functions.	Covered	
52	17-11-18	Overview of decision making loop control structures – the foreach	Covered	
53	19-11-18	Regular expressions – simple and multiple search patterns	Covered	
54	22-11-18	The match and substitute operators.	Covered	
55	24-11-18	Defining and using subroutines.	Covered	

Text Books:

1. Sumitabha Das., Unix Concepts and Applications., 4e Edition., Tata McGraw Hill
2. Behrouz A. Forouzan, Richard F. Gilberg : UNIX and Shell Programming- Cengage Learning – India Edition. 2009.

Reference Books:

1. M.G. Venkatesh Murthy: UNIX & Shell Programming, Pearson Education.
2. Richard Blum , Christine Bresnahan : Linux Command Line and Shell Scripting Bible, 2ndEdition , Wiley,2014.

Mr. Renukaradhya P C
Staff-Incharge

Prof. C V Shanmuka Swamy
Head, Dept of CSE

Dr. T Hemadri Naidu
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Cover Page: Course Overview
Semester: *III Semester*

Year: 2018-19

Course Title: Discrete Mathematical Structures	***Course Code:*** 17CS36
Total contact Hours: 56	***Duration of Exam:*** 03 Hrs.
Total exam marks: 100	***Total I.A. marks:*** 40
Course plan author: Raghu Nandan R.	***Date:*** 30/07/2018
Checked by: Prof.C.V. Shanmukaswamy	***Date:*** 31/07/2018

Prerequisites: Set theory, graphs, concepts of Integers.
Course Objectives: This course will enable students to

- Prepare for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science.
- Understand and apply logic, relations, functions, basic set theory, countability and counting arguments, proof techniques.
- Understand and apply mathematical induction, combinatory, discrete probability, recursion, sequence and recurrence, elementary number theory
- Understand and apply graph theory and mathematical proof techniques.

Course Outcomes:
The student should be able to

- Prepare for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science.
- Understand and apply logic, relations, functions, basic set theory, countability and counting arguments, proof techniques,
- Understand and apply mathematical induction, combinatory, discrete probability, recursion, sequence and recurrence, elementary number theory.
- Understand and apply graph theory and mathematical proof techniques.

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COURSE PLAN

Name of the Staff: Mr. RAGHU NANDAN R **Course Code:** 17CS36
Course Name: Discrete mathematical Structure **Class:** III SEM

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		MODULE-1		
01	01/08/2018	**Fundamentals of Logic**: Basic Connectives		
02	02/08/2018	Truth Tables		
03	03/08/2018	Logic Equivalence		
04	04/08/2018	Logic Equivalence contd..		
05	08/08/2018	The Laws of Logic,		
06	09/08/2018	The Laws of Logic contd..		
07	10/08/2018	Logical Implication – Rules of Inference.		
08	11/08/2018	Logical Implication – Rules of Inference. Contd....		
09	16/08/2018	The Use of Quantifiers, Quantifiers,		
10	17/08/2018	Definitions and Proofs of theorem.		
		MODULE-2		
11	18/08/2018	**Properties of the Integers**		
12	23/08/2018	Mathematical Induction		
13	24/08/2018	Mathematical Induction examples		
14	25/08/2018	The Well Ordering Principle – Mathematical Induction		
15	29/08/2018	mathematical induction contd...		
16	30/08/2018	Recursive Definitions		
17	31/08/2018	**Fundamental Principles of Counting:** The Rules of Sum and Product,		
18	01/09/2018	Permutations,		
19	05/09/2018	Combinations – The Binomial Theorem,		
20	06/09/2018	Combinations with Repetition,		
		MODULE-3		
21	07/09/2018	**Relations& Functions:**Cartesian Products of Relations		
22	08/09/2018	Functions – Plain and One-to-One, Onto Functions		
23	12/09/2018	The Pigeon-hole Principle		
24	14/09/2018	Function Composition and Inverse Functions		
25	15/09/2018	Properties of relations		
26	19/09/2018	Computer Recognition		
27	26/09/2018	Zero-One Matrices		
28	27/09/2018	Directed Graphs		
29	28/09/2018	Partial Orders – Hasse Diagrams		
30	29/09/2018	Equivalence Relations, Partitions		
		MODULE-4		
31	03/10/2018	**The Principle of Inclusion and Exclusion**: The Principle of Inclusion and Exclusion,		

32	04/10/2018	Generalizations of the Principle,		
33	05/10/2018	Generalizations of the Principle contd…		
34	06/10/2018	Derangements – Nothing is in its Right Place,		
35	10/10/2018	Rook Polynomials.		
36	11/10/2018	Rook Polynomials contd…		
37	12/10/2018	**Recurrence Relations:** First Order Linear Recurrence Relation,		
38	13/10/2018	First Order Linear Recurrence Relation contd..		
39	17/10/2018	The Second Order Linear Homogeneous Recurrence Relation with Constant Coefficients		
40	20/10/2018	The Second Order Linear Homogeneous Recurrence Relation with Constant Coefficients contd…		
		MODULE-5		
41	25/10/2018	**Introduction to Graph Theory:** Definitions and Ex,		
42	26/10/2018	Sub graphs,		
43	27/10/2018	Complements,		
44	02/11/2018	Graph Isomorphism,		
45	03/11/2018	Vertex Degree,		
46	07/11/2018	Euler Trails and Circuits ,		
47	09/11/2018	**Trees:** Definitions,		
48	10/11/2018	Properties and Examples,		
49	14/11/2018	Rooted Trees, Trees and Sorting,		
50	15/11/2018	Weighted Trees, Prefix Codes		
51	16/11/2018	Revision		
52	17/11/2018	Revision		
53	22/11/2018	Revision		
54	23/11/2018	Question paper discussion		
55	24/11/2018	Question paper discussion		
56	30/11/2018	Question paper discussion		

Text Books:

1. Ralph P. Grimaldi: Discrete and Combinatorial Mathematics, , 5th Edition, Pearson Education, 2004. **Ch 2, Ch 4: 4.1, 4.2, Ch 5:5.1 to 5.3, 5.5, 5.6, Ch 7:7.1 to 7.4, Ch 8: 8.1 to 8.4, Ch 10:10.1 to 10.2, Ch 11: 11.1 to 11.3, Ch 12: 12.1 to 12.4.**

Reference Books:

1. Basavaraj S Anami and Venakanna S Madalli: Discrete Mathematics – A Concept based approach, Universities Press, 2016

2. Kenneth H. Rosen: Discrete Mathematics and its Applications, 6th Edition, McGraw Hill, 2007.

3. Jayant Ganguly: A Treatise on Discrete Mathematical Structures, Sanguine-Pearson, 2010.

4. D.S. Malik and M.K. Sen: Discrete Mathematical Structures: Theory and Applications, Thomson, 2004.

5. Thomas Koshy: Discrete Mathematics with Applications, Elsevier, 2005, Reprint 2008.

[Mr.Raghu Nandan R]	[Prof.C.V.Shanmuka Swamy]	[Dr.T.Hemadri Naidu]
Staff Incharge	Head, Dept of CSE	Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Shridevi Institute of Engineering and Technology-Tumakuru-06
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2018-19(ODD Semester)

COURSE LECTURE PLAN

Cover Page: **Course Overview**
Semester : **V**

Year: 2018-2019

Course Title: **Management and Entrepreneurship for IT Industry**	*Subject Code:* **15CS51**
Total contact Hours: 54	*Duration of Exam:* 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Lesson plan author: Mr. Chethan M S	*Date:* 01/08/2018
Checked by: Prof. C V Shanmukaswamy	*Date:* 01/08/2018

Course objectives:
This course will enable students to

- Explain the principles of management, organization and entrepreneur.
- Discuss on planning, staffing, ERP and their importance.
- Infer the importance of intellectual property rights and relate the institutional support

Course outcomes:
After studying this course, students will be able to:

- Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship.
- Utilize the resources available effectively through ERP.
- Make use of IPRs and institutional support in entrepreneurship.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remark
01	01/08/18	**MODULE-1. Introduction** – Meaning, Nature and characteristics of Management		
02	02/08/18	Scope and functional areas of management,		
03	04/08/18	Goals of Management, Levels of Management		
04	07/08/18	brief overview of evolution of management theories		
05	08/08/18	Planning- Nature, importance,		
06	09/08/18	types of plans, steps in planning,		
07	11/08/18	Organizing- nature and purpose,		
08	14/08/18	types of Organization,		
09	16/08/18	types of Organization continued…		
10	18/08/18	Staffing- meaning,		
11	21/08/18	process of recruitment and selection		
12	23/08/18	**MODULE-2. Directing and controlling-**		
13	25/08/18	meaning and nature of directing		
14	28/08/18	leadership styles,		
15	29/08/18	motivation Theories,		
16	30/08/18	Communication- Meaning and importance,		
18	01/09/18	Communication- Meaning and importance continued….		
18	04/09/18	Coordination meaning and importance,		
19	05/09/18	Coordination meaning and importance continued….		
20	06/09/18	Controlling- meaning,		
21	08/09/18	steps in controlling,		
22	11/09/18	methods of establishing control.		
23	12/09/18	**MODULE-3. Entrepreneur** – meaning of entrepreneur,		
24	15/09/18	characteristics of entrepreneurs,		
25	18/09/18	classification and types of entrepreneurs,		
26	19/09/18	various stages in entrepreneurial process,		
27	25/09/18	role of entrepreneurs in economic development,		
28	26/09/16	Entrepreneurship in India and barriers to entrepreneurship		
29	27/09/18	Identification of business opportunities,		
30	29/09/18	market feasibility study,		
31	03/10/18	technical feasibility stud		
32	04/10/18	financial feasibility study and social feasibility study		
33	06/10/18	financial feasibility study and social feasibility study continued….		
34	09/10/18	**MODULE-4. Preparation of project and ERP** - meaning of project,		

35	10/10/18	project identification,		
36	11/10/18	project selection,		
37	13/10/18	project report, need and significance of project report,		
38	16/10/18	contents, formulation,		
39	17/10/18	guidelines by planning commission for project report,		
40	20/10/18	**Resource Planning: Meaning and Importance- ERP**		
41	23/10/18	**ERP** and Functional areas of Management		
42	25/10/18	Marketing / Sales- Supply Chain Management, Finance and Accounting		
43	27/10/18	Human Resources – Types of reports and methods of report generation		
44	03/11/18	**MODULE-5. Micro and Small Enterprises:** Definition of micro and small enterprises,		
45	07/11/18	characteristics and advantages of micro and small enterprises,		
46	10/11/18	steps in establishing micro and small enterprises,		
47	13/11/18	Government of India indusial policy 2007 on micro and small enterprises,		
48	14/11/18	case study (Microsoft), Case study(Captain G R Gopinath)		
49	15/11/18	Case study (N R Narayana Murthy & Infosys),		
50	17/11/18	**Institutional support:** MSME-DI, NSIC,		
51	20/11/18	SIDBI, KIADB, KSSIDC, TECSOK, KSFC,		
52	22/11/18	DIC and District level single window agency,		
53	24/11/18	**Introduction to IPR.**		
54	24/11/18	Revision, Question Paper Discussion		Extra

Text Books:

1. Principles of Management -P. C. Tripathi, P. N. Reddy; Tata McGraw Hill, 4th / 6th Edition, 2010.
2. Dynamics of Entrepreneurial Development & Management -Vasant Desai Himalaya Publishing House.
3. Entrepreneurship Development -Small Business Enterprises -Poornima M Charantimath Pearson Education – 2006.
4. Management and Entrepreneurship - Kanishka Bedi- Oxford University Press-2018

Reference Books:

1. Management Fundamentals -Concepts, Application, Skill Development Robert Lusier Thomson.
2. Entrepreneurship Development -S S Khanka -S Chand & Co.
3. Management -Stephen Robbins -Pearson Education /PHI -18th Edition, 2003

Mr. Chethan M S	**Prof. C V Shanmukaswamy**	**Dr. Hemadri Naidu T**
Staff Incharge	**Head, Dept of CSE**	**Principal**

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TUMKUR - 572106

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2018-19 (Odd Sem)

COURSE PLAN

Cover Page: Course Overview
Semester: V Semester **Year: 2018-19**

Course : **Database Management System**	Course Code: **15CS53**
Total contact Hours: **54**	Duration of Exam: **03 Hrs.**
Total exam marks: **80**	Total I.A. marks: **20**
Course plan author: **Mrs. Veena N D**	Date: **31/07/2018**
Checked by: **Prof. C V Shanmukaswamy**	Date: **31/07/2018**

COURSE OBJECTIVES:

The students will learn to

- Understand terms related to database design and management
- Understand the objectives of data and information management
- Understand the database development process
- Understand the relational model and relational database management system
- Assess data and information requirements
- Construct conceptual data models
- Evaluate the normality of a logical data model, and correct any anomalies
- Develop physical data models for relational database management systems
- Implement relational databases using a RDBMS
- Retrieve data using SQL
- Understand database performance issues
- Understand the basics of data management and administration
- Work as a valuable member of a database design and implementation team.

COURSE OUTCOME:

The student should be able to

- Understand terms related to database design and management
- Understand the objectives of data and information management
- Understand the database development process
- Understand the relational model and relational database management system
- Assess data and information requirements
- Construct conceptual data models
- Evaluate the normality of a logical data model, and correct any anomalies
- Develop physical data models for relational database management systems
- Implement relational databases using a RDBMS
- Retrieve data using SQL
- Understand database performance issues
- Understand the basics of data management and administration
- Work as a valuable member of a database design and implementation team.

Shridevi Institute of Engineering and Technology-Tumkur
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2018-19 (Odd Sem)

Name of the Staff: Mrs. Veena N D
Course Code: 15CS53
Class: V SEM CSE
Course: Database Management System

Sl. No.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		Module – 1		
01	02/8/2018	**Introduction to Databases:** Introduction, Characteristics of database approach,	Covered	
02	03/8/2018	Advantages of using the DBMS approach, History of database applications	Covered	
03	06/8/2018	**Overview of Database Languages and Architectures:** Data Models, Schemas, and Instances.	Covered	
04	07/8/2018	Three schema architecture and data independence, database languages, and interfaces, The Database System environment.	Covered	
05	8/2018	**Conceptual Data Modelling using Entities and Relationships:** Entity types, Entity sets,	Covered	
06	10/8/2018	attributes, roles, and structural constraints, Weak entity types,	Covered	
07	13/8/2018	ER diagrams, examples, Specialization and Generalization	Covered	
		Module – 2		
08	14/8/2018	**Relational Model**: Relational Model Concepts, Relational Model Constraints and relational database schemas,	Covered	
09	16/8/2018	Update operations, transactions, and dealing with constraint violations.	Covered	
10	17/8/2018	**Relational Algebra:** Unary and Binary relational operations, additional relational operations (aggregate, grouping, etc.)	Covered	
11	20/8/2018	Examples of Queries in relational algebra.	Covered	
12	21/8/2018	**Mapping Conceptual Design into a Logical Design:** Relational Database Design using ER-to-Relational mapping.	Covered	
13	8/2018	**SQL:** SQL data definition and data types, specifying constraints in SQL,	Covered	
14	24/8/2018	Retrieval queries in SQL, INSERT, DELETE, and UPDATE statements in SQL	Covered	
15	27/8/2018	Additional features of SQL.	Covered	
16	28/8/2018	Revision	Covered	
17	30/8/2018	Question Paper Discussion	Covered	
		Module – 3		
18	31/8/2018	**SQL : Advances Queries:** More complex SQL retrieval queries,	Covered	
19	03/9/2018	Specifying constraints as assertions and action triggers,	Covered	
20	04/9/2018	Views in SQL, Schema change statements in SQL.	Covered	
21	06/9/2018	**Database Application Development:** Accessing databases from applications,	Covered	
22	07/9/2018	An introduction to JDBC, JDBC classes and interfaces	Covered	
23	10/9/2018	SQLJ, Stored procedures	Covered	
24	11/9/2018	Case study: The internet Bookshop	Covered	

25	14/9/2018	**Internet Applications:** The three-Tier application architecture,	
26	17/9/2018	The presentation layer, The Middle Tier	
27	18/9/2018	Revision	
28	25/9/2018	Question Paper Discussion	

Module – 4

29	27/9/2018	**Normalization: Database Design Theory** – Introduction to Normalization using Functional and Multivalued Dependencies:	
30	28/9/2018	Informal design guidelines for relation schema, Functional Dependencies,	
31	1/10/2018	Normal Forms based on Primary Keys, Second and Third Normal Forms,	
32	4/10/2018	Boyce-Codd Normal Form,	
33	5/10/2018	Multivalued Dependency and Fourth Normal Form,	
34	9/10/2018	Join Dependencies and Fifth Normal Form.	
35	11/10/2018	**Normalization Algorithms:** Inference Rules, Equivalence, and Minimal Cover,	
36	12/10/2018	Properties of Relational Decompositions, Algorithms for Relational Database Schema Design,	
37	15/10/2018	Nulls, Dangling tuples, and alternate Relational Designs,	
38	16/10/2018	Further discussion of Multivalued dependencies and 4NF,	
39	/10/2018	Other dependencies and Normal Forms	

Module – 5

40	23/10/2018	**Transaction Processing:** Introduction to Transaction Processing, Transaction and System concepts,	
41	25/10/2018	Desirable properties of Transactions, Characterizing schedules based on recoverability,	
42	26/10/2018	Characterizing schedules based on Serializability, Transaction support in SQL.	
43	2/11/2018	**Concurrency Control in Databases:** Two-phase locking techniques for Concurrency control,	
44	5/11/2018	Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques,	
45	9/11/2018	Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking.	
46	11/2018	**Introduction to Database Recovery Protocols:** Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update,	
47	13/11/2018	Recovery techniques based on immediate update, Shadow paging.	
48	15/11/2018	Database backup and recovery from catastrophic failures	
49	16/11/2018	Revision	
50	19/11/2018	Question Paper Discussion	
51	20/11/2018	Question Paper Discussion	
52	22/11/2018	Question Paper Discussion	
53	23/11/2018	Question Paper Discussion	
54	30/11/2018	Question Paper Discussion	

TEXT BOOKS:

1. **Database systems Models, Languages, Design and Application Programming.** RamezElmasri and Shamkant B. Navathe, 7th Edition, 2017, Pearson.
2. **Database management systems,** Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.
2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design,Implementation and Management, Cengage Learning 2012.

Mrs Veena N D	**Prof. C V Shanmukaswamy**	**Dr. T. Hemadri Naidu**
Staff In-charge	HOD, Dept of CSE	Principal

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Cover Page: **Course Overview** **Year: 2017-18**
Semester: *V Semester*

Course Title: **AUTOMATA THEORY AND COMPUTABILITY**	*Course Code:* **15CS54**
Total contact Hours: **53**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Ms. Kiran G M**	*Date:* **30 /08/2018**
Checked by: **Prof. C.V Shanmukaswamy**	*Date:* **31/08/2017**

Objectives:

This course will enable students to:

- Introduce core concepts in Automata and Theory of Computation.
- Identify different Formal language Classes and their Relationships.
- Design Grammars and Recognizers for different formal languages.
- Prove or disprove theorems in automata theory using their properties.
- Determine the decidability and intractability of Computational problems.

Outcomes:

The student should be able to:

- Acquire fundamental understanding of the core concepts in automata theory and Theory of Computation
- Learn how to translate between different models of Computation (e.g.,Deterministic and Non-deterministic and Software models).
- Design Grammars and Automata (recognizers) for different language classes and become knowledgeable about restricted models of Computation (Regular, Context Free) and their relative powers.
- Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.
- Classify a problem with respect to different models of Computation.

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TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2017-18 (Odd Sem)

COURSE PLAN

Staff: Mr. Kiran G M **Class: V Sem**
Course: Formal Languages And Automata Theory **Sub. Code: 15CS54**

Sl. No.	Date	Topics planned	Topics covered	Remarks
01	01/08/18	**MODULE-1: Why study the Theory of Computation, Languages and Strings**: Strings, Languages.		
02	02/08/18	A Language Hierarchy, Computation,		
03	03/08/18	**Finite State Machines (FSM)**: Deterministic FSM,		
04	04/08/18	Regular languages,		
05	06/08/18	Designing FSM, Nondeterministic FSMs,		
06	08/08/18	From FSMs to Operational Systems,		
07	09/08/18	Simulators for FSMs,		
08	10/08/18	Minimizing FSMs,		
09	11/08/18	Canonical form of Regular languages,		
10	13/08/18	Finite State Transducers,		
11	16/08/18	Bidirectional Transducers.		
12	17/08/18	**MODULE – 2** Regular Expressions (RE): what is a RE?,		
13	18/08/18	Kleene's theorem,		
14	20/08/18	Applications of REs,		
15	23/08/18	Manipulating and Simplifying REs.		
16	24/08/18	Manipulating and Simplifying REs.		
17	25/08/18	Regular Grammars: Definition, Regular Grammars		
18	27/08/18	Regular Grammars		
19	29/08/18	and Regular languages.		
20	30/08/18	Regular Languages (RL) and Nonregular Languages: How many RLs,		
21	31/08/18	To show that a language is regular,		
22	01/09/18	Closure properties of RLs,		
23	03/09/18	to show some languages are not RLs.		
24	05/09/18	**MODULE – 3** Context-Free Grammars(CFG): Introduction to Rewrite Systems and Grammars,		
25	06/09/18	CFGs and languages,		
26	07/09/18	designing CFGs,		
27	08/09/18	simplifying CFGs,		
28	10/09/18	proving that a Grammar is correct,		
29	12/09/18	Derivation and Parse trees,		
30	14/09/18	Ambiguity, Normal Forms.		
31	15/09/18	Pushdown Automata (PDA): Definition of non-deterministic PDA,		
32	17/09/18	Deterministic PDA		
33	19/09/18	Non-deterministic PDAs,		
34	26/09/18	Non-determinism and Halting,		
35	27/09/18	Non-determinism and Halting,		
36	28/09/18	Alternative equivalent definitions of a PDA,		
37	29/09/18	alternatives that are not equivalent to PDA.		

38	01/10/18	**Module – 4** Context-Free and Non-Context-Free Languages: Where do the Context-Free Languages(CFL) fit.	
39	03/10/18	Showing a language is context-free,	
40	04/10/18	Pumping theorem for CFL,	
41	05/10/18	Important closure properties of CFLs,	
42	06/10/18	Deterministic CFLs.	
43	10/10/18	Deterministic CFLs contd..	
44	11/10/18	Algorithms and Decision Procedures for CFLs: Decidable questions,	
45	12/10/18	Un-decidable questions.	
46	13/10/18	Turing Machine: Turing machine model,	
47	15/10/18	Turing Machine: Turing machine model contd,	
48	17/10/18	Representation,	
49	20/10/18	Language acceptability by TM,	
50	22/10/18	design of TM,	
51	25/10/18	Techniques for TM construction.	
52	26/10/18	**MODULE – 5** Variants of Turing Machines (TM),	
53	27/10/18	The model of Linear Bounded automata:	
54	02/11/18	Decidability: Definition of an algorithm,	
55	03/11/18	decidability,	
56	05/11/18	decidable languages,	
57	09/11/18	Undecidable languages,	
58	10/11/18	halting problem of TM	
59	12/11/18	Post correspondence problem.	
60	14/11/18	Complexity: Growth rate of functions,	
61	16/11/18	the classes of P and NP,	
62	17/11/18	Quantum Computation: quantum computers,	
63	19/11/18	Church-Turing thesis.	
64	20/11/18	Discussion of previous year question papers	
65	23/11/18	Discussion of peevious year question papers	
66	24/11/18	Discussion of previous year question papers	

Text Books:

1. Elaine Rich, Automata, Computability and Complexity, 1st Edition, Pearson Education,2012/2013
2. K L P Mishra, N Chandrasekaran , 3rd Edition, Theory of Computer Science, Phl, 2012.

Textbook 1: Ch 1,2, 3,4, 5.1 to 5.10 Textbook 1: Ch 6, 7, 8: 6.1 to 6.4, 7.1, 7.2, 8.1 to 8.4
Textbook 1: Ch 11, 12: 11.1 to 11.8, 12.1, 12.2, 12.4, 12.5, 12.6 Textbook 1: Ch 13: 13.1 to 13.5, Ch 14: 14.1, 14.2,
Textbook 2: Ch 9.1 to 9.6 Textbook 2: Ch 9.7 to 9.8, 10.1 to 10.7, 12.1, 12.2, 12.8, 12.8.1, 12.8.2

Reference Books:

1. John E Hopcroft, Rajeev Motwani, Jeffery D Ullman, Introduction to AutomataTheory, Languages, and Computation, 3rd Edition, Pearson Education, 2013.
2. Michael Sipser : Introduction to the Theory of Computation, 3rd edition, Cengage learning,2013
3. John C Martin, Introduction to Languages and The Theory of Computation, 3rd Edition, Tata McGraw –Hill Publishing Company Limited, 2013
4. Peter Linz, "An Introduction to Formal Languages and Automata", 3rd Edition, Narosa Publishers, 1998
5. Basavaraj S. Anami, Karibasappa K G, Formal Languages and Automata theory, Wiley India, 2012
6. C K Nagpal, Formal Languages and Automata Theory, Oxford University press, 2012.

[Ms. Kiran.G.M]
Staff Incharge

[Prof. C.V Shanmukaswamy]
HOD, CSE

[Dr. T.Hemadri Naidu]
Principal

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COURSE PLAN

***Cover Page*: Subject Overview**
***Semester:* V Semester** **Year:2018-19**

Subject Title: **OBJECT-ORIENTED MODELING AND DESIGN**	*Subject Code:* 15CS551
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Suthan R	*Date:30/07/2018*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 31/07/2018

Prerequisites: None

Objectives:
The students will learn

- Demonstrate concept of use-case model, sequence model and state chart model for a given problem.
- Explain the facets of the unified process approach to design and build a Software system.
- Translate the requirements into implementation for Object Oriented design.
- Choose an appropriate design pattern to facilitate development procedure.

Outcomes:

The student should be

- Describe the concepts of object-oriented and basic class modelling.
- Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.
- Choose and apply a befitting design pattern for the given problem.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2018-19 (odd Sem)

COURSE PLAN

aff : Mr.Suthan R
ubject :Object Oriented Modeling And Design

Class :V
Sub.Code : 15CS551

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
1	01/08/18	**Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development?		
2	03/08/18	OO Themes; Evidence for usefulness of OO development;		
3	06/08/18	OO modelling history. Modelling as Design technique: Modelling; abstraction;		
4	07/08/18	The Three models. Class Modelling: Object and Class Concept;		
5	08/08/18	Link and associations concepts; Generalization and Inheritance;		
6	10/08/18	A sample class model; Navigation of class models; Advanced Class Modelling,		
7	13/08/18	Advanced object and class concepts; Association ends;		
8	14/08/18	N-ary associations; Aggregation; Abstract classes;		
9	15/08/18	Multiple inheritance; Metadata; Reification; Constraints;		
10	17/08/18	Derived Data; Packages. Question papers solvation		
11	20/08/18	**Module – 2:** UseCase Modelling and Detailed Requirements		
12	21/08/18	Overview; Detailed objectoriented Requirements definitions		
13	22/08/18	System Processes-A use case/Scenario view		
14	24/08/18	Identifying Input and outputs-The System sequence diagram		
15	27/08/18	Identifying Input and outputs-The System sequence diagram cont....		
16	28/08/18	Identifying Object Behaviour-		
17	29/08/18	Identifying Object Behaviour cont...		
18	31/08/18	The state chart Diagram		
19	03/09/18	Integrated Object-oriented Models.		
20	04/09/18	Question papers solvation		
21	05/09/18	**Module – 3:** Process Overview		
22	07/09/18	System Conception and Domain Analysis		
23	10/09/18	Process Overview: Development stages;		
24	11/09/18	Development life Cycle		
25	12/09/18	System Conception: Devising a system concept;		
26	14/09/18	Elaborating a concept; preparing a problem statement		
27	17/09/18	Domain Analysis: Overview of analysis		
28	18/09/18	Domain Class model: Domain state model		
29	19/09/18	Domain interaction model Iterating the analysis		
30	25/09/18	Question papers solvation		

31	26/09/18	**Module – 4:** Use case Realization :The Design Discipline within up iterations:		
32	28/09/18	Object Oriented Design-The Bridge between Requirements and Implementation		
33	01/10/18	Object Oriented Design-The Bridge between Requirements and Implementation cont....		
34	03/10/18	Design Classes and Design within Class Diagrams;		
35	05/10/18	Interaction Diagrams-Realizing Use Case and defining methods;		
36	09/10/18	Designing with Communication Diagrams		
37	10/10/18	Updating the Design Class Diagram;		
38	12/10/18	Package Diagrams-Structuring the Major Components;		
39	15/10/18	Implementation Issues for Three-Layer Design.		
40	16/10/18	Question papers solvation		
41	17/10/18	**Module – 5:** Design Patterns: Introduction; what is a design pattern?,		
42	22/10/18	Describing design patterns,		
43	23/10/18	the catalogue of design patterns,		
44	26/10/18	Organizing the catalogue, How design patterns solve design problems,		
45	02/11/18	how to select a design patterns		
46	05/11/18	how to use a design pattern;		
47	09/11/18	Creational patterns: prototype and singleton (only);		
48	13/11/18	Creational patterns: prototype and singleton (only); cont....		
49	19/11/18	Structural patterns adaptor and proxy (only)		
50	20/11/18	Question papers solvation		

TEXT BOOKS:

1. Michael Blaha, James Rumbaugh: Object Oriented Modelling and Design with UML,2nd Edition, Pearson Education,2005
2. Satzinger, Jackson and Burd: Object-Oriented Analysis & Design with the Unified Process, Cengage Learning, 2005.
3. Erich Gamma, Richard Helm, Ralph Johnson and john Vlissides: Design Patterns – Elements of Reusable Object-Oriented Software, Pearson Education,2007.

REFERENCE BOOKS:

1. Grady Booch et. al.: Object-Oriented Analysis and Design with Applications,3rd Edition,Pearson Education,2007.
2. Frank Buschmann, ReginеMeunier, Hans Rohnert, Peter Sommerlad, Michel Stal: Pattern –Oriented Software Architecture. A system of patterns , Volume 1, John Wiley and Sons.2007.
3. Booch, Jacobson, Rambaugh : Object-Oriented Analysis and Design with Applications, 3rd edition, pearson, Reprint 2013

[Sulhan R]
Staff Incharge

[Prof. C V Sharmuthaiswamy]
HOD, CSE

[Dr. T HemadriNaidu]
Principal

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COURSE PLAN

Cover Page: **Course Overview**
Semester: V Semester, A & B sec **Year: 2018-19**

Course Title: Cloud Computing	**Course Code:** 15CS565
Total contact Hours: 53	**Duration of Exam:** 03 Hrs.
Total exam marks: 80	**Total I.A. marks:** 20
Course plan author: Mr. Basavesha D	**Date:** 01/08/2018
Checked by: Prof. C.V.Shanmuka Swamy	**Date:** 01/08/2018

Prerequisites: Computer Networks basics.

Course objectives: This course will enable students to

- Explain the technology and principles involved in building a cloud environment.
- Contrast various programming models used in cloud computing
- Choose appropriate cloud model for a given application

Course outcomes: The students should be able to:

- Explain the concepts and terminologies of cloud computing
- Demonstrate cloud frameworks and technologies
- Define data intensive computing
- Demonstrate cloud applications

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (ODD Sem)

Staff: Mr. Chethan M S & Mrs.Veena N D | **Class: VA2(Friday)**
Course Name: Computer Network Laboratory | **Course Code: 15CSL57**

SL. NO.	DATE	TOPICS PLANNED	REMARKS
01	26/07/2019	Sample Programs	
		B- PART	
02	02/08/2019	12. Write a program for congestion control using leaky bucket algorithm	
03	09/08/2019	7. Write a program for error detecting code using CRC-CCITT (16-bits).	
04	16/08/2019	8. Write a program to find the shortest path between vertices using bellman-ford algorithm.	
05	23/08/2019	11. Write a program for simple RSA algorithm to encrypt and decrypt the data.	
06	30/08/2019	9. Using TCP/IP sockets, write a client – server program to make the client send the filename and to make the server send back the contents of the requested file if present.	
07	13/09/2019	10. Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	
08	20/09/2019	**1st INTERNAL + Additional Programme Conduction**	
		A- PART	
09	27/09/2019	1. Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	
10	04/10/2019	2. Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	
11	11/10/2019	3. Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	
12	18/10/2019	4. Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	
13	25/10/2019	5. Implement and study the performance of GSM on NS2/ NS3 (Using MAC layer) or equivalent environment. 6. Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	
14	08/11/2019	**2nd INTERNAL + Additional NS2 Programme Conduction**	
15	29/11/2019	**3rd INTERNAL**	

Note: **Students are allowed to pick one experiment from part A and part B with lot. Change of experiment is allowed only once and marks allotted to the procedure part to be made zero.**

[Mr. Chethan M S & Mrs. Veena N D]
Staff In charge

[Prof. C V Shanmukhaswamy]
HOD, CSE

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (ODD Sem)

Staff: Mr. Chethan M S & Mrs.Veena N D **Class: V A1(Tuesday)**
Course Name: Computer Network Laboratory **Course Code: 17CSL57**

SL. NO.	DATE	TOPICS PLANNED	REMARKS
01	30/07/2019	Sample Programs	
		B- PART	
02	06/08/2019	12. Write a program for congestion control using leaky bucket algorithm.	
03	13/08/2019	7. Write a program for error detecting code using CRC -CCITT (16-bits).	
04	20/08/2019	8. Write a program to find the shortest path between vertices using bellman-ford algorithm.	
05	27/08/2019	11. Write a program for simple RSA algorithm to encrypt and decrypt the data.	
06	03/09/2019	9. Using TCP/IP sockets, write a client – server program to make the client send the filename and to make the server send back the contents of the requested file if present.	
07	17/09/2019	10. Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	
08	24/09/2019	**1st INTERNAL + Additional Programme Conduction**	
		A – PART	
09	01/10/2019	1. Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	
10	05/10/2019	2. Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	**Extra Lab: 1:30 pm to 04:30 pm**
11	22/10/2019	3. Implement an 8 the node LAN using n nodes and set multiple traffic nodes and plot congestion window for different source/ destination.	
12	05/11/2019	4. Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	
13	12/11/2019	5. Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment. 6. Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	
14	19/11/2019	**2nd INTERNAL + Additional NS2 Programme Conduction**	
15	26/11/2019	**3rd INTERNAL**	

Note: **Students are allowed to pick one experiment from part A and part B with lot. Change of experiment is allowed only once and marks allotted to the procedure part to be made zero.**

[Mr. Chethan M S & Mrs.Veena N D]
Staff In charge

[Prof. C. Chandrika Sastry]
HOD, CSE

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

TUMKUR-572106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Staff: Prof. Veena N D , Prof. Chethan M S

Sem: III 'A2'batch

Course: Analog And Digital Electronics Laboratory

Course Code : 18CSL37

Sl no.	Date	TOPICS PLANNED	TOPICS COVERED	REMARK
01	31/07/19	Introduction. Basic gates(AND,OR,NOT),NAND,NOR,XOR	Covered	
02	07/08/19	Design and implement Half adder, Full Adder, Half Subtractor, Full Subtractor using basic gates. And implement the same in HDL.	COVERED	
03	14/08/19	Implement Half adder, Full Adder, Half Subtractor, Full Subtractor using HDL.	COVERED	
04	21/08/19	Given a 4-variable logic expression, simplify it using appropriate technique and realize the simplified logic expression using 8:1 multiplexer IC. And implement the same in HDL.	COVERED	
05	28/08/19	Realize a J-K Master / Slave Flip-Flop using NAND gates and verify its truth table. And implement the same in HDL.	COVERED	
06	04/09/19	Design and implement code converter I)Binary to Gray (II) Gray to Binary Code using basic gates.	Covered	
07	11/09/19	Design and implement a mod-n (n<8) synchroonous up counter using J-K Flip-Flop ICs and demonstrate its working.	COVERED	
08	18/09/19	I- Internals	COVERED	
09	25/09/19	Design and implement an asynchronous counter using decade counter IC to count up from 0 to n (n<=9) and demonstrate on 7-segment display (using IC-7447)	COVERED	
10	06/10/19	Design an astable multivibrator cirult for three cases of duty cycle (50%, 30%) using NE 555 timer IC	COVERED	
11	23/10/19	Simulate the astable multivibrator circuit for any one duty cycle.	COVERED	
12	30/10/19	Using ua 741 Opamp, design a 1 kHz Relaxation Oscillator with 50% duty cycle. Simulate the same.	COVERED	
13	06/11/19	Using ua 741 opamp, design a window comparator for any given UTP and LTP. And simulate the same.	COVERED	
14	13/11/19	II- Internal	COVERED	
15	20/11/19	III- Internal	COVERED	

(Prof. Veena N D, Prof. Chethan M S)

Course Instructors

(Prof. C Shanmuka Swamy)

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TUMKUR-572106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Staff: Prof. Veena N D , Prof. Chethan M S **Sem: III 'A1'batch**

Course: Analog And Digital Electronics Laboratory **Course Code : 18CSL37**

Sl no.	Date	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	29/07/19	Introduction. Basic gates AND,OR,NOT (NAND,NOR,XOR	Covered	
02	05/08/19	Design and implement Half adder, Full Adder, Half Subtractor, Full Subtractor using basic gates. And implemem the same in HDL	Covered	
03	19/08/19	Implement Half adder, Full Adder, Half Subtractor, Full Subtractor using HDL	Covered	
04	26/08/19	Given a 4-variable logic expression, simplify it using appropriate technique and realize the simplified logic expression using 8:1 multiplexer IC. And implement the same in HDL.	Covered	
05	09/09/19	Realize a J-K Master / Slave Flip-Flop using NAND gates and verify its truth table. And implement the same in HDL	Covered	
06	14/09/19	Design and implement code converter i)Binary to Gray (ii) Gray to Binary Code using basic gates.	Covered	Extra
07	16/09/19	Design and implement a mod-n (n<8) synchronous up counter using J-K Flip-Flop ICs and demonstrate its working	Covered	
08	23/09/19	**I- Internals**	Covered	
09	30/09/19	Design and implement an asynchronous counter using decade counter IC to count up from 0 to n (n<=9) and demonstrate on 7-segment display (using IC 7447)	Covered	
10	21/10/19	Design an astable multivibrator circuit for three cases of duty cycle (50%, 30%) using NE 555 timer IC.	Covered	
11	28/10/19	Simulate the astable multivibrator circuit for any one duty cycle.	Covered	
12	04/11/19	Using an 741 Opamp, design a 1 kHz Relaxation Oscillator with 50% duty cycle. Simulate the same	Covered	
13	11/11/19	Using an 741 opamp, design a window comparator for any given UTP and LTP. And simulate the same.	Covered	
14	18/11/19	**II- Internal**	Covered	
15	25/11/19	**III- Internal**	Covered	

(Prof. Veena N D, Prof. Chethan M.S)

Course Instructors

(Prof. C Vidyadhara Swamy)

HOD, CSE

37	22/04/19	Plan-driven development	Covered	
38	25/04/19	Project scheduling	Covered	
39	26/04/19	Estimation techniques	Covered	
40	27/04/19	Estimation techniques Continued....	Covered	
41	29/04/19	**Quality management**: Software quality	Covered	
42	02/05/19	Reviews and inspections	Covered	
43	03/05/19	Software measurement and metrics	Covered	
44	03/05/19	Software standards	Covered	Extra
45	04/05/19	**MODULE-5: Agile Software Development:** Introduction	Covered	
46	06/05/19	Coping with Change	Covered	
47	09/05/19	The Agile Manifesto: Values and Principles.	Covered	
48	09/05/19	Agile methods: SCRUM (Ref "**The SCRUM Primer, Ver 2.0**") and Extremd Programming	Covered	Extra
49	10/05/19	Agile methods: SCRUM (Ref "**The SCRUM Primer, Ver 2.0**") and Extreme Programming Continued...	Covered	
50	11/05/19	Plan-driven and agile development	Covered	
51	13/05/19	Agile project management	Covered	
52	13/05/19	Agile project management Continued....	Covered	Extra
53	20/05/19	Scaling agile methods.	Covered	
54	23/05/19	Revision	Covered	

TEXT BOOKS:

1. Ian Sommerville: Software Engineering, 9th Edition, Pearson Education, 2012..
   (Listed topics only from Chapters 1,2,3,4, 5, 7, 8, 9, 23, and 24)
2. The SCRUM Primer, Ver 2.0, http://www.goodagile.com/scrumprimer/scrumprimer20.pdf

REFERENCE BOOKS

1. Roger S. Pressman: Software Engineering-A Practitioners approach, 7th Edition, TataMcGraw Hill.
2. Pankaj Jalote: An Integrated Approach to Software Engineering, Wiley India

Web Reference for eBooks on Agile:

1. http://agilemanifesto.org/
2. http://www.jamesshore.com/Agile-Book/

(Prof. Chethan M.S)	**(Prof. Kumar H R)**	**(Dr. Hemadri Naidu T)**
Staff Incharge	**HOD, ISE**	**Principal**

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMAKURU-06

DEPARTMENT OF INFORMATION SCIENCE & ENGG.

Academic Year 2018-19 (Even SEM)

LECTURE PLAN

Name of the Staff: Prof. Chethan M.S
Course : Software engineering

Class: IV
Course Code: 17CS45

Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	01/02/19	**MODULE-1: Introduction**: Software Crisis,	Covered	
02	02/02/19	Need for Software Engineering, Professional Software Development,	✓	
03	04/02/19	Software Engineering Ethics, Case Studies.	✓	
04	07/02/19	**Software Processes**: Models: Waterfall Model	✓	
05	08/02/19	Incremental Model and Spiral Model	✓	
06	09/02/19	Process activities	✓	
07	11/02/19	**Requirements Engineering**: Requirements Engineering Processes	Covered	
08	14/02/19	Requirements Elicitation and Analysis	Covered	
09	15/02/19	Functional and non-functional requirements	Covered	
10	16/02/19	The software Requirements Document	Covered	
11	18/02/19	Requirements Specification, Requirements validation	Covered	
12	21/03/19	Requirements Management	Covered	
			Covered	
13	22/02/19	**MODULE-2: System Models**: Context models	covered	
14	23/02/19	Interaction models	Covered	
15	25/02/19	Structural models	Covered	
16	28/02/19	Behavioral models	Covered	
17	01/03/19	Model-driven engineering	Covered	
18	02/03/19	**Design and Implementation**: Introduction to RUP	Covered	
19	07/03/19	Design Principles	Covered	
20	08/03/19	Object-oriented design using the UML	Covered	
21	09/03/19	Object-oriented design using the UML Continued...	Covered	
22	11/03/19	Design patterns	Covered	
23	18/03/19	Implementation issues	Covered	
24	21/03/19	Open source development	Covered	
25	22/03/19	**MODULE-3: Software Testing**: Development testing	covered	
26	23/03/19	Test-driven development	Covered	
27	25/03/19	Test-driven development Continued...	Covered	
28	28/03/19	Release testing	Covered	
29	01/04/19	User testing	Covered	
30	04/04/19	Test Automation	Covered	
31	05/04/19	Test Automation Continued....	Covered	
32	08/04/19	**Software Evolution**: Evolution processes	Covered	
33	11/04/19	Program evolution dynamics	Covered	
34	12/04/19	Software maintenance	Covered	
35	13/04/19	Legacy system management	Covered	
36	15/04/19	**MODULE-4: Project Planning**: Software pricing	Covered	

Shridevi Institute of Engineering and Technology-Tumakuru
(An ISO 9001-2008 Certified Institution)
Academic Year 2018-19 (Even Sem)
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE LECTURE PLAN

Name of the Staff: Prof. Chethan M.S
Course: Software Engineering

Course Code: 17CS45
Class: IV

Course Title: Software Engineering	***Course Code:*** 17CS45
Total contact Hours: 54	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
Lesson plan author: Prof. Chethan M.S	*Date:01/02/2019*
Checked by: Prof. Kumar H R	*Date:01/02/2019*

Course objectives: This course will enable students to

- Outline software engineering principles and activities involved in building large software programs
- Identify ethical and professional issues and explain why they are of concern to software engineers
- Describe the process of requirements gathering, requirements classification, requirements specification and requirements validation.
- Differentiate system models, use UML diagrams and apply design patterns.
- Discuss the distinctions between validation testing and defect testing.
- Recognize the importance of software maintenance and describe the intricacies involved in software evolution
- Apply estimation techniques, schedule project activities and compute pricing.
- Identify software quality parameters and quantify software using measurements and metrics.
- List software quality standards and outline the practices involved.
- Recognize the need for agile software development, describe agile methods, apply agile practices and plan for agility

Course outcomes: After studying this course, students will be able to:

- Design a software system, component, or process to meet desired needs within realistic constraints
- Assess professional and ethical responsibility
- Function on multi-disciplinary teams
- Use the techniques, skills, and modern engineering tools necessary for engineering practice
- Analyze, design, implement, verify, validate, implement, apply, and maintain software systems or parts of software systems.

Question paper pattern:

The question paper will have ten questions.
There will be 2 questions from each module.
Each question will have questions covering all the topics under a module.
The students will have to answer 5 full questions, selecting one full question from each module.

Text Books:

1. Muhammad Ali Mazidi, Janice Gillispie Mazidi, Danny Causey, The x86 PC Assembly Language Design and Interfacing, 5th Edition, Pearson, 2013.
2. **ARM system developers guide**, Andrew N Sloss, Dominic Symes and Chris Wright, Elsevier,Morgan Kaufman publishers, 2008.

Reference Books:

1.Douglas V. Hall: Microprocessors and Interfacing, Revised 2nd Edition, TMH, 2006.
2. K. Udaya Kumar & B.S. Umashankar : Advanced Microprocessors & IBM-PC Assembly Language Programming, TMH 2003.
3. Ayala : The 8086 Microprocessor: programming and interfacing - 1st edition, Cengage Learning
4. The Definitive Guide to the ARM Cortex-M3, by Joseph Yiu, 2nd Edition , Newnes, 2009
5. The Insider's Guide to the ARM7 based microcontrollers, Hitex Ltd.,1st edition, 2005
6. ARM System-on-Chip Architecture, Steve Furber, Second Edition, Pearson, 2015
7. Architecture, Programming and Interfacing of Low power Processors- ARM7, Cortex-M and MSP430, Lyla B Das Cengage Learning, 1st Edition

[Mr.Mallesh H.L]
Staff In-Charge

[Prof. C.V. Shanmukaswamy]
Head, Dept of CSE

[Dr.Hemadri Naidu T]
Principal

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TUMKUR - 572106.

29	13/3/2019	16-bit memory interfacing	Covered	
30	19/3/2019	**8255 I/O programming:** I/O addresses MAP of x86 PC's	Covered	
31	20/3/2019	programming and interfacing the 8255	Covered	
32	21/3/2019	programming and interfacing the 8255 continued	Covered	
33	22/3/2019	Revision	Covered	
		Module 4		
34	23/3/2019	Microprocessors versus Microcontrollers,	Covered	
35	26/3/2019	**ARM Embedded Systems** :The RISC design philosophy,	Covered	
36	27/3/2019	The ARM Design Philosophy	Covered	
37	28/3/2019	Embedded System Hardware	Covered	
38	2/4/2019	Embedded System Software	Covered	
39	3/4/2019	**ARM Processor Fundamentals** : Registers	Covered	
40	4/4/2019	Current Program Status Register	Covered	
41	5/4/2019	Pipeline, Exceptions	Covered	
42	9/4/2019	Interrupts, and the Vector Table	Covered	
43	10/4/2019	Core Extensions	Covered	
44	11/4/2019	Revision	Covered	
		Module 5		
45	12/4/2019	**Introduction to the ARM Instruction Set** : Data Processing Instructions	Covered	
46	13/4/2019	Data Processing Instructions	Covered	
47	23/4/2019	Branch Instructions	Covered	
48	24/4/2019	Software Interrupt Instructions	Covered	
49	25/4/2019	Software Interrupt Instructions continued	Covered	
50	26/4/2019	Program Status Register Instructions	Covered	
51	27/4/2019	Coprocessor Instructions	Covered	
52	30/4/2019	Loading Constants	Covered	
53	2/5/2019	Simple programming exercises continued	Covered	
54	3/5/2019	Revision	Covered	
55	4/5/2019	Discussion of previous year question papers	Covered	
56	8/5/2019	Discussion of previous year question papers	Covered	
57	9/5/2019	Discussion of previous year question papers	Covered	
58	10/5/2019	Discussion of previous year question papers	Covered	
59	11/5/2019	Discussion of previous year question papers	Covered	
60	14/5/2019	Discussion of previous year question papers	Covered	
61	15/5/2019	Discussion of previous year question papers	Covered	
62	21/5/2019	Discussion of previous year question papers	Covered	
63	22/5/2019	Discussion of previous year question papers	Covered	
64	23/5/2019	Discussion of previous year question papers	Covered	

Shridevi Institute of Engineering and Technology-Tumkur
(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Course In-Charge: Mr. Mallesh H.L. **Course Code: 17CS44**

Course: Microprocessors & Microcontrollers **Class: IV SEM**

SL No.	DATE	TOPIC	Topics covered	Remarks
		Module 1		
01	1/2/2019	**The x86 microprocessor:** Brief history of the x86 family		
02	2/2/2019	Inside the 8088/86,		
03	5/2/2019	Introduction to Program Segments, The Stack		
04	6/2/2019	Flag register, x86 Addressing Modes		
05	7/2/2019	**Assembly language programming:** Directives & a Sample Program,		
06	8/2/2019	Assemble, Link & Run a program		
07	9/2/2019	More Sample programs		
08	12/2/2019	Control Transfer Instructions		
09	13/2/2019	Data Types and Data Definition, Full Segment Definition		
10	14/2/2019	Flowcharts and Pseudo code		
11	15/2/2019	Revision		
		Module 2		
12	16/2/2019	**x86:** Instructions sets description,		
13	19/2/2019	**Arithmetic and logic instructions and programs:** Unsigned Addition and Subtraction		
14	20/2/2019	Unsigned Multiplication and Division		
15	21/2/2019	Logic Instructions		
16	22/2/2019	BCD and ASCII conversion		
17	23/2/2019	Rotate Instructions, **INT 21H and INT 10H**		
18	26/2/2019	**Programming :** Bios INT 10H Programming		
19	27/2/2019	DOS Interrupt 21H		
20	28/2/2019	8088/86 Interrupts		
21	1/3/2019	x86 PC and Interrupt Assignment		
22	2/3/2019	Revision		
		Module 3		
23	5/3/2019	**Signed Numbers and Strings:** Signed number Arithmetic Operations		
24	6/3/2019	Signed number Arithmetic Operations continued.		
25	7/3/2019	String operations		
26	8/3/2019	String operations continued		
27	9/3/2019	**Memory and Memory interfacing:** Memory address decoding		
28	12/3/2019	data integrity in RAM and ROM		

Course Plan

***Cover Page*: Course Overview**
Semester: IV Semester **Year: 2018-19**

Course Title: Microprocessors & Microcontrollers	*Course Code:* **17CS44**
Total contact Hours:64	*Duration of Exam:* 03 Hrs.
Total exam marks: 100	*Total I.A. marks:* 40
Course plan author: Mr. Mallesh H.L	*Date:* 31/01/2019
Checked by: Prof. C.V Shanmukaswamy	*Date:* 31/01/2019

Prerequisites: Transistors, Logic gates, ALU

Course Objectives:
This course will enable students to

- Make familiar with importance and applications of microprocessors and microcontrollers
- Expose architecture of 8086 microprocessor and ARM processor
- Familiarize instruction set of ARM processor

Course Outcomes:
After studying this course, students will be able to

- Differentiate between microprocessors and microcontrollers
- Design and develop assembly language code to solve problems
- Gain the knowledge for interfacing various devices to x86 family and ARM processor
- Demonstrate design of interrupt routines for interfacing devices

29	27/03/19	**Single source shortest paths:** Dijkstra's Algorithm (T1:9.3).	Covered	
30	28/03/19	**Optimal Tree problem:** Huffman Trees and Codes (T1:9.4).	Covered	
31	01/04/19	**Transform and Conquer Approach:** Heaps and Heap Sort (T1:6.4).	Covered	
32	02/04/19	**Module – 4 10 Hours** **Dynamic Programming:** General method with Examples,	Covered	
33	03/04/19	Multistage Graphs (T2:5.1, 5.2).	Covered	
34	04/04/19	**Transitive Closure:** Warshall's Algorithm,	Covered	
35	08/04/19	**All Pairs Shortest Paths:** Floyd's Algorithm,	Covered	
36	09/04/19	Optimal Binary Search Trees,	Covered	
37	10/04/19	Knapsack problem ((T1:8.2, 8.3, 8.4),	Covered	
38	11/04/19	Bellman-Ford Algorithm (T2:5.4),	Covered	
39	15/04/19	Bellman-Ford Algorithm continued	Covered	
40	22/04/19	Travelling Sales Person problem (T2:5.9),	Covered	
41	23/04/19	Reliability design (T2:5.8).	Covered	
42	24/04/19	**MODULE – 5 10 Hours** **Backtracking:** General method (T2:7.1),	Covered	
43	25/04/19	N-Queens problem (T1:12.1),	Covered	
44	29/04/19	Sum of subsets problem (T1:12.1),	Covered	
45	30/04/19	Graph coloring (T2:7.4), Hamiltonian cycles (T2:7.5).	Covered	
46	02/05/19	**Branch and Bound:** Assignment Problem,	Covered	
47	06/05/19	Travelling Sales Person problem (T1:12.2),	Covered	
48	08/05/19	**0/1 Knapsack problem** (T2:8.2, T1:12.2): LC Branch and Bound solution (T2:8.2),	Covered	
49	09/05/19	FIFO Branch and Bound solution (T2:8.2).	Covered	
50	13/05/19	**NP-Complete and NP-Hard problems:** Basic concepts, non-deterministic algorithms,	Covered	
51	14/05/19	P, NP, NP-Complete, and NP-Hard classes (T2:11.1).	Covered	
52	15/05/19	Revision	Covered	
53	20/05/19	Revision	Covered	
54	21/05/19	Revision	Covered	
55	22/05/19	Previous year question papers discussion	Covered	
56	23/05/19	Previous year question papers discussion	Covered	

Text Books:

T1. Introduction to the Design and Analysis of Algorithms, Anany Levitin:, 2nd Edition, 2009. Pearson.

T2. Computer Algorithms/C++, Ellis Horowitz, Satraj Sahni and Rajasekaran, 2nd Edition, 2014, Universities Press

Reference Books:

1. Introduction to Algorithms, Thomas H. Cormen, Charles E. Leiserson, Ronal L. Rivest, Clifford Stein, 3rd Edition, PHI
2. Design and Analysis of Algorithms , S. Sridhar, Oxford (Higher Education)

[Ms. Priyadarshini M]
Staff In charge

[Prof. C.V. Shivakumaswamy]
HOD, CSE

[Dr. T Hemadri Naidu]
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

Sri Shridevi Charitable Trust (R.)
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
(Recognized by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)
Sira Road, Tumakuru - 572 106, Karnataka
Phone: 0816-2210639 | Fax: 0816-2210638 | Email: info@shridevienggtumkur.org | Web: http://www.shridevienggtumkur.org

Academic Year 2018-19 (Even Sem)

COURSE PLAN

Staff: Ms. Priyadarshini M
Course: Design And Analysis Of Algorithms

Class: IV Sem
Sub. Code: 17CS43

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	04/02/19	**MODULE-1: 10 Hours** **Introduction:** What is an Algorithm? (T2:1.1),	covered	
02	05/02/19	Algorithm Specification (T2:1.2),	Covered	
03	06/02/19	Algorithm Specification continued	Covered	
04	07/02/19	Analysis Framework (T1:2.1),	Covered	
05	11/02/19	**Performance Analysis:** Space complexity, Time complexity (T2:1.3).	Covered	
06	12/02/19	**Asymptotic Notations:** Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and Little-oh notation (o).	Covered	
07	13/02/19	Mathematical analysis of Non-Recursive and recursive Algorithms with Examples (T1:2.2, 2.3, 2.4).	Covered	
08	14/02/19	Mathematical analysis of Non-Recursive and recursive Algorithms with Examples continued	Covered	
09	18/02/19	**Important Problem Types:** Sorting, Searching, String processing, Graph Problems, Combinatorial Problems.	covered	
10	19/02/19	**Fundamental Data Structures:** Stacks, Queues, Graphs,	Covered	
11	20/02/19	Trees, Sets and Dictionaries.	Covered	
12	21/02/19	**MODULE – 2 10 Hours** **Divide and Conquer**: General method,	Covered	
13	25/02/19	Binary search, Recurrence equation for divide and conquer,	Covered	
14	26/02/19	Finding the maximum and minimum (T2:3.1, 3.3, 3.4),	Covered	
15	27/02/19	Merge sort, (T1:4.1, 4.2),	Covered	
16	28/02/19	Merge sort continued	Covered	
17	05/03/19	Quick sort,	covered	
18	06/03/19	Quick sort continued	Covered	
19	07/03/19	Strassen's matrix multiplication (T2:3.8),	Covered	
20	11/03/19	Advantages and Disadvantages of divide and conquer.	Covered	
21	12/03/19	**Decrease and Conquer Approach:** Topological Sort. (T1:5.3)	Covered	
22	13/03/19	**MODULE – 3 10 Hours** **Greedy Method:** General method,	Covered	
23	18/03/19	Coin Change Problem, Knapsack Problem,	Covered	
24	19/03/19	Knapsack Problem continued	Covered	
25	20/03/19	Job sequencing with deadlines (T2:4.1, 4.3, 4.5).	Covered	
26	21/03/19	**Minimum cost spanning trees:** Prim's Algorithm,	Covered	
27	25/03/19	Prim's Algorithm continued	Covered	
28	26/03/19	Kruskal's Algorithm (T1:9.1, 9.2).	Covered	

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Sira Road, Tumakuru - 572 106, Karnataka.
Phone: 0816-2015689 | Fax: 0816-2015688 | Email: info@shridevienggineering.org | Web: http://www.shridevienggineering.org

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Academic Year 2018-19 (Even Sem)

COURSE PLAN

Cover Page: **Course Overview** **Year: 2018-19**

Semester: IV Semester

Course Title: **DESIGN AND ANALYSIS OF ALGORITHMS**	*Course Code:* **17CS43**
Total contact Hours: **56**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **60**	*Total I.A. marks:* **40**
Lesson plan author: **Ms. Priyadarshini M**	*Date:* **01/ 02/ 2019**
Checked by: **Prof. C V Shanmukaswamy**	*Date:* **01/ 02/ 2019**

Objectives:

This course will enable students to:

- Describe techniques for effective problem solving in computing.
- Solve problems like sorting, searching etc. using different paradigms of problem solving.
- Analyse the asymptotic performance of algorithms.

Outcomes:

After studying this course, student should be able to:

- Describe computational solution to well known problems like searching, sorting etc.
- Estimate the computational complexity of different algorithms.
- Develop an algorithm using appropriate design strategies for problem solving.

30	01/04/2019	Importing Packages, Interfaces	Covered	
31	03/04/2019	**Module 4 Multi Threaded Programming, Event Handling:** Multi Threaded Programming: What are threads? How to make the classes threadable	Covered	
32	05/04/2019	Extending threads; Implementing runnable	Covered	
33	08/04/2019	Synchronization	Covered	
34	10/04/2019	Changing state of the thread	Covered	
35	12/04/2019	Bounded buffer problems, read write problem, producer consumer problems	Covered	
36	13/04/2019	**Event Handling:** Two event handling mechanisms; The delegation event model	Covered	
37	15/04/2019	Event classes; Sources of events	Covered	
38	22/04/2019	Event listener interfaces; Using the delegation event model	Covered	
39	24/04/2019	Adapter classes	Covered	
40	26/04/2019	Inner classes	Covered	
41	27/04/2019	**Module 5 The Applet Class:** Introduction, Two types of Applets; Applet basics; Applet Architecture; An Applet skeleton	Covered	
42	29/04/2019	Simple Applet display methods; Requesting repainting; Using the Status Window	Covered	
43	03/05/2019	The HTML APPLET tag; Passing parameters to Applets	Covered	
44	04/05/2019	getDocumentbase() and getCodebase(); AppletContext and showDocument()	Covered	
45	06/05/2019	The AudioClip Interface; The AppletStub Interface;Output to the Console	Covered	
46	08/05/2019	**Swings:** The origins of Swing; Two key Swing features; Components and Containers	Covered	
47	10/05/2019	The Swing Packages; A simple Swing Application; Create a Swing Applet	Covered	
48	11/05/2019	JLabel and ImageIcon; JTextField	Covered	
49	13/05/2019	The Swing Buttons; JTabbedPane; JScrollPane	Covered	
50	15/05/2019	JList; JComboBox; JTable	Covered	

Text Books:

1. Sourav Sahay, Object Oriented Programming with C++ , Oxford University Press,2006 (Chapters 1, 2, 4)
2. Herbert Schildt, Java The Complete Reference, 7th Edition, Tata McGraw Hill, 2007. (Chapters 1, 2, 3, 4, 5, 6, 8, 9,10, 11, 21, 22, 29, 30)

Reference Books:

1. Mahesh Bhave and Sunil Patekar, "Programming with Java", First Edition, Pearson Education,2008, ISBN:9788131720806
2. Herbert Schildt, The Complete Reference C++, 4th Edition, Tata McGraw Hill, 2003.
3. Stanley B.Lippmann, Josee Lajoie, C++ Primer, 4th Edition, Pearson Education, 2005.
4. Rajkumar Buyya,S Thamarai selvi, xingchen chu, Object oriented Programming with java, Tata McGraw Hill education private limited.
5. Richard A Johnson, Introduction to Java Programming and OOAD, CENGAGE Learning. 6. E Balaguruswamy, Programming with Java A primer, Tata McGraw Hill companies.

[Prof. C.V.Sharanaka Swamy] 13/11/19
Staff Incharge

[Prof. C.V.Sharanaka Swamy] 13/11/19
Head, Dept of CSE

3-11-19
[Dr. T. Hemadri Naidu]
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Name of the Course Instructor: Prof. C.V.Shanmuka Swamy
Course Name: OBJECT ORIENTED CONCEPTS

Class: IV SEM
Course Code: 17CS42

Sl. No	Date	Topic	Topics Covered	Remarks
1	01/02/2019	**Module 1 Introduction to Object Oriented Concepts:** A Review of structures	Covered	
2	02/02/2019	Procedure-Oriented Programming system, Object Oriented Programming System	Covered	
3	04/02/2019	Comparison of Object Oriented Language with C	Covered	
4	06/02/2019	Console I/O, variables and reference variables	Covered	
5	08/02/2019	Function Prototyping, Function Overloading.	Covered	
6	09/02/2019	**Class and Objects:** Introduction, member functions and data	Covered	
7	11/02/2019	objects and functions	Covered	
8	13/02/2019	objects and arrays	Covered	
9	15/02/2019	Namespaces, Nested classes	Covered	
10	16/02/2019	Constructors, Destructors	Covered	
11	18/02/2019	**Module 2 Introduction to Java:** Java's magic	Covered	
12	20/02/2019	the Byte code	Covered	
13	22/02/2019	Java Development Kit (JDK)	Covered	
14	25/02/2019	The Java Buzzwords	Covered	
15	25/02/2019	Object-oriented programming	Covered	
16	27/02/2019	Simple Java programs	Covered	
17	01/03/2019	Data types	Covered	
18	02/03/2019	variables and arrays	Covered	
19	06/03/2019	Operators	Covered	
20	08/03/2019	Control Statements	Covered	
21	09/03/2019	**Module 3 Classes, Inheritance, Exceptions, Packages and Interfaces:** Classes: Classes fundamentals	Covered	
22	11/03/2019	Declaring objects	Covered	
23	13/03/2019	Constructors, this keyword	Covered	
24	18/03/2019	garbage collection	Covered	
25	20/03/2019	**Inheritance:** inheritance basics	Covered	
26	22/03/2019	using super, creating multi level hierarchy	Covered	
27	23/03/2019	Method overriding	Covered	
28	25/03/2019	**Exception handling:** Exception handling in Java	Covered	
29	27/03/2019	Packages, Access Protection	Covered	

ENRN-3rd 2018-19

Shridevi Institute of Engineering and Technology-Tumkur
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN **WEF: 01/02/2019**

Cover Page: Course Overview
Class : IV Semester **Year: 2018-19**

Course Title : **OBJECT ORIENTED CONCEPTS**	Course Code: **17CS42**
Total contact Hours: **50**	Duration of Exam: **03 Hrs.**
SEE marks : **60** [100 reduced to 60]	CIE marks: **40**
Course plan author : **Prof. C.V.Shanmuka Swamy**	Date: **31/01/2019**
Checked by : **Prof. C.V.Shanmuka Swamy**	Date: **31/01/2019**

Prerequisites: Programming knowledge in C/C++ Langauge

Objective:

- Learn fundamental features of object oriented language and JAVA
- Set up Java JDK environment to create, debug and run simple Java programs.
- Create multi-threaded programs and event handling mechanisms.
- Introduce event driven Graphical User Interface (GUI) programming using applets and swings.

Outcomes:

Having successfully completed this course, students will be able to:

- Explain the object-oriented concepts and JAVA.
- Develop computer programs to solve real world problems in Java
- Know the installation of java software and its program settings.
- Effectively create and execute Java programs.
- Able to write programs using java threads.
- Know how to create user interfaces with event handling.
- Develop simple GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles using Applets and swings

27	27/09/18	Local replication in classic and virtual environments	Covered
28	01/10/18	Remote replication in classic and virtual environments	Covered
29	03/10/18	Three-site remote replication and continuous data protection	Covered
30	04/10/18	Revision, Question papers solvation	covered
31	09/10/18	**Module – 4: Cloud Computing Characteristics and benefits** This unit focuses on the business drivers	Covered
32	10/10/18	definition, essential characteristics	Covered
33	11/10/18	phases of journey to the Cloud	covered
34	15/10/18	Business drivers for Cloud computing, Definition of Cloud computing	Covered
35	16/10/18	Characteristics of Cloud computing	Covered
36	17/10/18	Steps involved in transitioning from Classic data center to Cloud computing environment Services and deployment models	covered
37	22/10/18	Steps involved in transitioning from Classic data center to Cloud computing environment Services and deployment models Contn...	Covered
38	23/10/18	Cloud infrastructure components	Covered
39	25/10/18	Cloud migration considerations	Covered
40	05/11/18	Revision, Question papers solvation	Covered
41	07/11/18	**Module – 5: Securing and Managing Storage Infrastructure** This chapter focuses on framework	Covered
42	12/11/18	Domains of storage security along with covering security	Covered
43	13/11/18	implementation at storage networking	Covered
44	14/11/18	Security threats, and countermeasures in various domains Security solutions for FC-SAN	Covered
45	15/11/18	IP-SAN and NAS environments, Security in virtualized	Covered
46	19/11/18	Cloud environments, Monitoring and managing various information infrastructure components in classic	Covered
47	20/11/18	Virtual environments, Information lifecycle management (ILM)	Covered
48	22/11/18	Storage tiering	Covered
49	03/12/18	Cloud service management activities	Covered
50	04/12/18	Revision, Question papers solvation	Covered

TEXT BOOKS:

1. Information Storage and Management,Author :EMC Education Services, Publisher: Wiley ISBN: 9781118094839
2. Storage Virtualization, Author: Clark Tom, Publisher: Addison Wesley Publishing Company ISBN : 9780321262516.

REFERENCE BOOKS:

NIL.

[Suhan R]
Staff Incharge

[Prof. C V Shanmukeswamy]
HOD, CSE

27-5-18

[Dr. T Hemadri Naidu]
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2018-19 (odd Sem)

COURSE PLAN

Class :VII
Sub.Code : 15CS754

taff : Mr.Suthan R
ubject : STORAGE AREA NETWORKS

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
1	06/08/18	**Module – 1 :Storage System** Introduction to evolution of storage architecture	Covered	
2	07/08/18	key data center elements, virtualization, and cloud computing	Covered	
3	08/08/18	Key data center elements – Host (or compute), connectivity	Covered	
4	09/08/18	Storage, and application in both classic and virtual environments	Covered	
5	13/08/18	RAID implementations, techniques, and levels along with the impact of RAID on application performance	Covered	
6	14/08/18	Levels along with the impact of RAID on application performance Contd...	Covered	
7	16/08/18	Components of intelligent storage systems	Covered	
8	20/08/18	Virtual storage provisioning	Covered	
9	21/08/18	Intelligent storage system implementations	Covered	
10	23/08/18	Revision, Question papers solvation		
11	27/08/18	**Module – 2: Storage Networking Technologies and Virtualization** Fibre Channel SAN components	Covered	
12	28/08/18	connectivity options, and topologies including access protection mechanism 'zoning"	Covered	
13	29/08/18	FC protocol stack, addressing and operations	Covered	
14	30/08/18	SAN-based virtualization and VSAN technology	Covered	
15	03/09/18	iSCSI and FCIP protocols for storage access over IP network	Covered	
16	04/09/18	Converged protocol FCoE and its components	Covered	
17	05/09/18	Network Attached Storage (NAS) - components	Covered	
18	06/09/18	Protocol and operations File level storage virtualization	Covered	
19	10/09/18	Object based storage and unified storage platform	Covered	
20	11/09/18	Revision, Question papers solvation		
21	12/09/18	**Module – 3: Backup, Archive, and Replication** This unit focuses on information availability and business continuity solutions in both virtualized	Covered	
22	17/09/18	Non-virtualized environments. Business continuity terminologies	Covered	
23	18/09/18	Planning and solutions	Covered	
24	19/09/18	Clustering and multipathing architecture to avoid single points of failure	Covered	
25	25/09/18	Backup and recovery - methods, targets and topologies	Covered	
26	26/09/18	Data deduplication and backup in virtualized environment, Fixed content and data archive	Covered	

COURSE PLAN

***Cover Page*: Subject Overview**
Semester: VII Semester **Year:2018-19**

Subject Title: **STORAGE AREA NETWORKS**	*Subject Code:* **15CS754**
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Suthan R	*Date:30/07/2018*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 31/07/2018

Prerequisites: None

Objectives:
The students will learn

- Evaluate storage architectures.
- Define backup, recovery, disaster recovery, business continuity, and replication
- Examine emerging technologies including IP-SAN
- Understand logical and physical components of a storage infrastructure
- Identify components of managing and monitoring the data center
- Define information security and identify different storage virtualization technologies

Outcomes:

The students should be able to:

- Identify key challenges in managing information and analyze different storage networking technologies and virtualization
- Explain components and the implementation of NAS
- Describe CAS architecture and types of archives and forms of virtualization
- Illustrate the storage infrastructure and management activities

27	01/10/2018	Interprter Files, system Function, Process Accounting, User Identification, and Process Times, I/O Redirection.	Covered	
28	03/10/2018	**Process Relationships:** Introduction, Terminal Logins, Network Logins.	Covered	
29	04/10/2018	Process Groups, Sessions, Controlling Terminal, tcgetpgrp, tcsetpgrp Functions.	Covered	
30	06/10/2018	Job Control, Shell Execution of Programs, Orphaned Process Groups.	Covered	
		Module – 4		
31	09/10/2018	**SIGNALS AND DAEMON PROCESSES:** Signals: The UNIX Kernel Support for Signals.	Covered	
32	11/10/2018	Signal, Signal Mask, sigaction.	Covered	
33	13/10/2018	The SIGCHLD Signal and the waitpid Function,	Covered	
34	15/10/2018	The sigsetjmp and siglongjmp Functions.	Covered	
35	17/10/2018	Kill Alarm, Interval Timers, and POSIX Timers.	Covered	
36	20/10/2018	**Daemon Processes:** Introduction,	Covered	
37	22/10/2018	Daemon Characteristics	Covered	
38	25/10/2018	Coding Rules, Error Logging,	Covered	
39	27/10/2018	Daemon conventions, Client-Server Model.	Covered	
		Module – 5		
40	03/11/2018	**INTERPROCESS COMMUNICATION:** Overview of IPC Methods.	Covered	
41	05/11/2018	Pipes, popen, pclose Functions.	Covered	
42	07/11/2018	Coprocesses.	Covered	
43	10/11/2018	FIFOs, System V IPC	Covered	
44	12/11/2018	Message Queues, Semaphores,	Covered	
45	14/11/2018	Shared Memory, Client-Server Properties,	Covered	
46	15/11/2018	Stream Pipes, Passing File Descriptors,	Covered	
47	17/11/2018	An Open Server- Version 1, Client-Server Connection Function.	Covered	
48	19/11/2018	Revision	Covered	
49	22/11/2018	Previous Question Paper Discussion	Covered	
50	24/11/2018	Previous Question Paper Discussion	Covered	
51	01/12/2018	Previous Question Paper Discussion	Covered	
52	03/12/2018	Previous Question Paper Discussion	Covered	

TEXT BOOKS:

1. **Unix System Programming Using C++** – Terrence Chan - Prentice Hall India, 1999. 2. **Stephen A. Rago: Advanced Programming in the UNIX Environment** – W.Richard Stevens, 2nd Edition, Pearson Education / PHI, 2005.

REFERENCE BOOKS:

1. **Advanced UNIX Programming** – Marc J. Rochkind: 2nd Edition, Pearson Education, 2005. 2. **The Design of the UNIX Operating System** – Maurice J.Bach:, Pearson Education / PHI, 1987.

3. **Unix Internals** – Uresh Vahalia: Pearson Education, 2001.

[Mrs. Prathibha T S]
Staff in charge

[Prof. C. V Sharanaka Swamy]
HOD, CSE

[Dr.T. Himadri Naidu]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMAKURU - 572106.

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2018-19 (ODD SEM)
Department of Computer Science & Engg.

COURSEPLAN

Name of the Staff: Mrs.Prathibha T S
Course Code: 15CS744
Course Name: UNIX System Programming
Class: VII SEM

Sl No.	DATE	TOPIC PLANNED	TOPICS COVERED	REMARKS
		Module – 1		
01	06/08/2018	**INTRODUCTION:** UNIX and ANSI Standards: The ANSI C Standard.	Covered	
02	08/08/2018	The ANSI/ISO C++ Standards, Difference between ANSI C and C++.	Covered	
03	09/08/2018	The POSIX Standards, The POSIX.1 FIPS Standard.	Covered	
04	11/08/2018	The X/Open Standards.	Covered	
05	13/08/2018	UNIX and POSIX APIs: The POSIX APIs.	Covered	
06	16/08/2018	The UNIX and POSIX Development Environment.	Covered	
07	18/08/2018	API Common Characteristics.	Covered	
		Module – 2		
08	20/08/2018	**UNIX FILES AND APIs:** File Types.	Covered	
09	23/08/2018	The UNIX and POSIX File System, The UNIX and POSIX File Attributes.	Covered	
10	25/08/2018	Inodes in UNIX System V, Application Program Interface to Files.	Covered	
11	27/08/2018	UNIX Kernel Support for Files.	Covered	
12	29/08/2018	Relationship of C Stream Pointers and File Descriptors.	Covered	
13	30/08/2018	Directory Files, Hard and Symbolic Links.	Covered	
14	01/09/2018	**UNIX File APIs:** General File APIs, File and Record Locking.	Covered	
15	03/09/2018	Directory File APIs, Device File APIs.	Covered	
16	05/09/2018	FIFO File APIs, Symbolic Link File APIs.	Covered	
		Module – 3		
17	06/09/2018	**UNIX PROCESSES AND PROCESS CONTROL:** The Environment of a UNIX Process: Introduction, main function.	Covered	
18	08/09/2018	Process Termination, Command-Line Arguments.	Covered	
19	10/09/2018	Environment List, Memory Layout of a C Program.	Covered	
20	12/09/2018	Shared Libraries, Memory Allocation.	Covered	
21	15/09/2018	Environment Variables, setjmp and longjmp Functions.	Covered	
22	17/09/2018	getrlimit, setrlimit Functions.	Covered	
23	19/09/2018	UNIX Kernel Support for Processes.	Covered	
24	26/09/2018	**PROCESS CONTROL:** Introduction, Process Identifiers.	Covered	
25	27/09/2018	fork, vfork, exit, wait, waitpid, waited, wait3, wait4 Functions.	Covered	
26	29/09/2018	Race Conditions, exec Functions, Changing User IDs and Group IDs.	Covered	

Shridevi Institute of Engineering and Technology, Tumkur
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: Course Overview
Semester: VII Semester **Year: 2018-2019**

Course Title: UNIX System Programming	**Course Code: 15CS744**
Total contact Hours: 52	**Duration of Exam: 03 Hrs.**
Total exam marks: 80	**IA marks: 20**
Course plan author: Mrs.Prathibha T S	**Date: 06/08/2018**
Checked by: Prof. C.V Shanmuka Swamy	**Date: 06/08/2018**

Course objectives:

This course will enable students to

- Explain the fundamental design of the UNIX operating system
- Familiarize with the systems calls provided in the UNIX environment
- Design and build an application/service over the UNIX operating system

Course outcomes:

The students should be able to:

- Ability to understand and reason out the working of Unix Systems
- Build an application/service over a UNIX system.

27	01/10/2018	Interpreter Files, system Function, Process Accounting, User Identification, and Process Times, I/O Redirection.	Covered	
28	03/10/2018	**Process Relationships:** Introduction, Terminal Logins, Network Logins.	Covered	
29	04/10/2018	Process Groups, Sessions, Controlling Terminal, sigsetjmp, siosetjmp Functions.	Covered	
30	06/10/2018	Job Control, Shell Execution of Programs, Orphaned Process Groups.	Covered	
		Module – 4		
31	10/10/2018	**SIGNALS AND DAEMON PROCESSES:** Signals: The UNIX Kernel Support for Signals.	Covered	
32	11/10/2018	Signal, Signal Mask, sigaction.	Covered	
33	13/10/2018	The SIGCHLD Signal and the waitpid Function.	Covered	
34	15/10/2018	The sigsetjmp and siglongjmp Functions.	Covered	
35	17/10/2018	Kill Alarm, Interval Timers, and POSIX.1b Timers.	Covered	
36	20/10/2018	**Daemon Processes:** Introduction,	Covered	
37	22/10/2018	Daemon Characteristics	Covered	
38	25/10/2018	Coding Rules, Error Logging.	Covered	
39	27/10/2018	Daemon conventions; Client-Server Model.	Covered	
		Module – 5		
40	03/11/2018	**INTERPROCESS COMMUNICATION:** Overview of IPC Methods.	Covered	
41	05/11/2018	Pipes, popen, pclose Functions.	Covered	
42	07/11/2018	Coprocesses.	Covered	
43	10/11/2018	FIFOs, System V IPC	Covered	
44	12/11/2018	Message Queues, Semaphores,	Covered	
45	14/11/2018	Shared Memory, Client-Server Properties,	Covered	
46	15/11/2018	Stream Pipes, Passing File Descriptors,	Covered	
47	17/11/2018	An Open Server- Version 1, Client-Server Connection Function,	Covered	
48	19/11/2018	Revision	Covered	
49	22/11/2018	Previous Question Paper Discussion	Covered	
50	24/11/2018	Previous Question Paper Discussion	Covered	
51	01/12/2018	Previous Question Paper Discussion	Covered	
52	03/12/2018	Previous Question Paper Discussion	Covered	

TEXT BOOKS:

1. **Unix System Programming Using C++** – Terrence Chan - Prentice Hall India, 1999. 2. **Stephen A. Rago: Advanced Programming in the UNIX Environment** – W.Richard Stevens, 2nd Edition, Pearson Education / PHI, 2005.

REFERENCE BOOKS:

1. **Advanced UNIX Programming** – Marc J. Rochkind: 2nd Edition, Pearson Education, 2005. 2. **The Design of the UNIX Operating System** – Maurice.J.Bach:, Pearson Education / PHI, 1987.

3. **Unix Internals** – Uresh Vahalia: Pearson Education, 2001.

[Mrs. Prathibha T S]
Staff in charge

[Prof. H R Kumar]
HOD, ISE

[Dr.T. Hemadri Naidu]
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGG. & TECHNOLOGY
TUMKUR - 572 106

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2018-19 (ODD SEM)
Department of Information Science & Engg.

COURSEPLAN

Name of the Staff: Mrs.Prathibha T S

Course Code: 15CS744

Course Name: UNIX System Programming.

Class: VII SEM

Sl No.	DATE	TOPIC PLANNED	TOPICS COVERED	REMARKS
		Module – 1		
01	06/08/2018	**INTRODUCTION:** UNIX and ANSI Standards: The ANSI C Standard.	covered	
02	08/08/2018	The ANSI/ISO C++ Standards, Difference between ANSI C and C++.	Covered	
03	09/08/2018	The POSIX Standards, The POSIX.1 FIPS Standard.	Covered	
04	11/08/2018	The X/Open Standards.	Covered	
05	13/08/2018	UNIX and POSIX APIs: The POSIX APIs.	Covered	
06	14/08/2018	The UNIX and POSIX Development Environment.	Covered	
07	18/08/2018	API Common Characteristics.	Covered	
		Module – 2		
08	20/08/2018	**UNIX FILES AND APIs:** File Types.	Covered	
09	23/08/2018	The UNIX and POSIX File System, The UNIX and POSIX File Attributes.	Covered	
10	25/08/2018	Inodes in UNIX System V, Application Program Interface to Files.	Covered	
11	27/08/2018	UNIX Kernel Support for Files.	Covered	
12	29/08/2018	Relationship of C Stream Pointers and File Descriptors.	Covered	
13	04/08/2018	Directory Files, Hard and Symbolic Links.	Covered	
14	01/09/2018	**UNIX File APIs:** General File APIs, File and Record Locking.	Covered	
15	03/09/2018	Directory File APIs, Device File APIs.	Covered	
16	05/09/2018	FIFO File APIs, Symbolic Link File APIs.	Covered	
		Module – 3		
17	06/09/2018	**UNIX PROCESSES AND PROCESS CONTROL:** The Environment of a UNIX Process: Introduction, main function.	Covered	
18	08/09/2018	Process Termination, Command-Line Arguments.	Covered	
19	10/09/2018	Environment List, Memory Layout of a C Program.	Covered	
20	12/09/2018	Shared Libraries, Memory Allocation.	Covered	
21	15/09/2018	Environment Variables, setjmp and longjmp Functions.	Covered	
22	17/09/2018	getrlimit, setrlimit Functions.	Covered	
23	19/09/2018	UNIX Kernel Support for Processes.	Covered	
24	26/09/2018	**PROCESS CONTROL:** Introduction, Process Identifiers.	Covered	
25	27/09/2018	fork, vfork, exit, wait, waitpid, waited, wait3, wait4 Functions.	Covered	
26	29/09/2018	Race Conditions, exec Functions, Changing User IDs and Group IDs.	Covered	

Shridevi Institute of Engineering and Technology, Tumkur
(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: Course Overview
Semester: VII Semester **Year: 2018-2019**

Course Title: UNIX System Programming	**Course Code: 15CS744**
Total contact Hours: 52	**Duration of Exam: 03 Hrs.**
Total exam marks: 80	**IA marks: 20**
Course plan author: Mrs.Prathibha T S	**Date: 06/08/2018**
Checked by: Prof. H R Kumar	**Date: 06/08/2018**

Course objectives:

This course will enable students to

- Explain the fundamental design of the UNIX operating system
- Familiarize with the systems calls provided in the UNIX environment
- Design and build an application/service over the UNIX operating system

Course outcomes:

The students should be able to:

- Ability to understand and reason out the working of Unix Systems
- Build an application/service over a UNIX system.

36	16/10/18	ML for predicting probabilities,	Covered	
37	20/10/18	MDL principle,	Covered	
38	23/10/18	Naive Bayes classifier,	Covered	
39	25/10/18	Bayesian belief networks,	Covered	
40	26/10/18	EM algorithm	Covered	
41	27/10/18	EM algorithm continued.	Covered	
42	02/11/18	Revision	Covered	
43	03/11/18	**MODULE – 5 10 Hours** **Evaluating Hypothesis:** Motivation, Estimating hypothesis accuracy,	Covered	
44	09/11/18	Basics of sampling theorem,	Covered	
45	10/11/18	General approach for deriving confidence intervals,	Covered	
46	13/11/18	Difference in error of two hypothesis,	Covered	
47	15/11/18	Comparing learning algorithms.	Covered	
48	16/11/18	**Instance Based Learning:** Introduction, k-nearest neighbor learning,	Covered	
49	17/11/18	Locally weighted regression,	Covered	
50	20/11/18	radial basis function,	Covered	
51	22/11/18	cased-based reasoning,	Covered	
52	23/11/18	**Reinforcement Learning:** Introduction,	Covered	
53	24/11/18	Learning Task, Q Learning	Covered	
54	30/11/18	Revision	Covered	
55	01/12/18	Revision	Covered	
56	04/12/18	Revision	Covered	

Text Books:

1. Tom M. Mitchell, Machine Learning, India Edition 2013, McGraw Hill Education.

Text Book1, Sections: 1.1 – 1.3, 2.1-2.5, 2.7
Text Book1, Sections: 3.1-3.7
Text book 1, Sections: 4.1 – 4.6
Text book 1, Sections: 6.1 – 6.6, 6.9, 6.11, 6.12
Text book 1, Sections: 5.1-5.6, 8.1-8.5, 13.1-13.3

Reference Books:

1. Trevor Hastie, Robert Tibshirani, Jerome Friedman, h The Elements of Statistical Learning, 2nd edition, springer series in statistics.
2. Ethem Alpaydin, Introduction to machine learning, second edition, MIT press.

[Ms. Swetha K.H]
Staff In charge

[Prof. C.V Shantilkaiwamy]
HOD, CSE

[Dr. T Hemadri Naidu]
Principal

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SHRIDEVI INSTITUTE OF
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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2018-19 (Odd Sem)

COURSE PLAN

Staff: Ms. Swetha K.H | **Class: VII Sem**
Course: Machine Learning | **Sub. Code: 15CS73**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	07/08/18	**MODULE-1: 10 Hours** **Introduction:** Well posed learning problems,	Covered	
02	09/08/18	Designing a Learning system,	Covered	
03	10/08/18	Designing a Learning system continued.	Covered	
04	11/08/18	Perspective and Issues in Machine Learning.	Covered	
05	14/08/18	**Concept Learning:** Concept learning task,	Covered	
06	16/08/18	Concept learning as search,	Covered	
07	17/08/18	Find-S algorithm,	Covered	
08	18/08/18	Version space, Candidate Elimination algorithm,	Covered	
09	21/08/18	Candidate Elimination algorithm continued.	Covered	
10	23/08/18	Inductive Bias.	Covered	
11	24/08/18	Revision	Covered	
12	25/08/18	**MODULE – 2 10 Hours** **Decision Tree Learning:** Decision tree representation,	covered	
13	28/08/18	Appropriate problems for decision tree learning,	Covered	
14	30/08/18	Basic decision tree learning algorithm,	Covered	
15	31/08/18	ID3 algorithm,	Covered	
16	01/09/18	Entropy, Information Gain	Covered	
17	04/09/18	hypothesis space search in decision tree learning,	Covered	
18	06/09/18	hypothesis space search in decision tree learning continued	Covered	
19	07/09/18	Inductive bias in decision tree learning.	Covered	
20	08/09/18	Issues in decision tree learning	Covered	
21	11/09/18	Issues in decision tree learning continued- pruning	Covered	
22	14/09/18	Revision	covered	
23	15/09/18	**MODULE – 3 08 Hours** **Artificial Neural Networks:** Introduction,	Covered	
24	18/09/18	Neural Network representation,	Covered	
25	25/09/18	Appropriate problems,	Covered	
26	27/09/18	Perceptrons,	Covered	
27	28/09/18	Perceptrons continued.	Covered	
28	29/09/18	Perceptrons continued.	Covered	
29	04/10/18	Backpropagation algorithm.	Covered	
30	05/10/18	Backpropagation algorithm continued.	Covered	
31	06/10/18	Revision	Covered	
32	09/10/18	**Module – 4 10 Hours** **Bayesian Learning:** Introduction,	Covered	
33	11/10/18	Bayes theorem,	Covered	
34	12/10/18	Bayes theorem and concept learning,	Covered	
35	13/10/18	ML and LS error hypothesis,	Covered	

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TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2018-19 (Odd Sem)

COURSE PLAN

Cover Page: **Course Overview**
Semester: ***VII Semester*** **Year: 2018-19**

Course Title: **MACHINE LEARNING**	*Course Code:* **15CS73**
Total contact Hours: **56**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Ms. Swetha K.H**	*Date:* **29/08/2018**
Checked by: **Prof. C.V Shanmukaswamy**	*Date:* **29/08/2018**

Objectives:

This course will enable students to:

- Define machine learning and problems relevant to machine learning.
- Differentiate supervised, unsupervised and reinforcement learning
- Apply neural networks, Bayes classifier and k nearest neighbor, for problems appear in machine learning.
- Perform statistical analysis of machine learning techniques.

Outcomes:

After studying this course, student should be able to:

- Identify the problems for machine learning. And select the either supervised, unsupervised or reinforcement learning.
- Explain theory of probability and statistics related to machine learning
- Investigate concept learning, ANN, Bayes classifier, k nearest neighbor, Q.

		MODULE IV Parallel and Scalable Architectures		
31	10/10/2018	Multiprocessors and Multicomputers Multiprocessor System Interconnects	covered	
32	11/10/2018	Cache Coherence and Synchronization Mechanisms	Covered	
33	13/10/2018	Three Generations of Multicomputers ,Message-Passing	covered	
34	15/10/2018	Mechanisms ,Multivector and SIMD Computers	Covered	
35	17/10/2018	Vector Processing Principles Multivector Multiprocessors	Covered	
36	20/10/2018	Compound Vector Processing	Covered	
37	22/10/2018	SIMD ComputerOrganizations Scalable	Covered	
38	25/10/2018	Multithreaded, and Dataflow Architectures, Latency-Hiding Techniques	Covered	
39	27/10/2018	Principles of Multithreading, Fine-Grain Multicomputers,	Covered	
40	03/11/2018	Scalable and Multithreaded Architectures, Dataflow and Hybrid Architectures	Covered	
		MODULE V Software for parallel programming:		
41	05/11/2018	Parallel Models, Languages, and Compilers,Parallel Programming Models, Parallel Languages and Compilers ,	Covered	
42	07/11/2018	Dependence Analysis of Data Arrays ,Parallel Program Development and Environments	covered	
43	03/11/2018	Synchronization and Multiprocessing Modes. Instruction and System Level Parallelism,	Covered	
44	10/11/2018	Instruction Level Parallelism ,Computer Architecture ,Contents	Covered	
45	12/11/2018	Basic Design Issues ,Problem Definition ,Model of a Typical Processor	Covered	
46	14/11/2018	Compiler-detected Instruction Level Parallelism	Covered	
47	15/11/2018	Operand Forwarding ,Reorder Buffer, Register Renaming ,	Covered	
48	19/11/2018	Tomasulo's Algorithm ,Branch Prediction,	Covered	
49	24/11/2018	Limitations in Exploiting Instruction Level Parallelism	Covered	
50	01/12/2018	Thread Level Parallelism.	Covered	
51	03/12/2018	Revision	Covered	
52	04/12/2018	Model Question paper Discussion	Covered	

Text Books:

1. Kai Hwang: Advanced Computer Architecture Parallelism, Scalability, Programability, 2nd Edition, Tata Mc Graw Hill, 2010.

Reference Books:

1. John L. Hennessey and David A. Patterson: Computer Architecture, A Quantitative Approach, 4th Edition, Elsevier, 2007. (Chapter. 1.1 to 1.9, 2.1 to 2.10, 4.1to 4.6, 5.1 to 5.4, Appendix A, Appendix C, Appendix G)

[Mr. Venugopal B]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr.T Hemadri Naidu]
Principal

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SIET / CSE / 2018 - 2019/ WEF: 06/08/2018

Staff: Mr. Venugopal D **Class: VII Sem**
Course Name : Advanced Computer Architectures **Course Code: 15CS72**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		MODULE I Theory of Parallelism		
01	06/08/2018	Parallel Computer Models	Covered	
02	08/08/2018	The State of Computing,Multiprocessors and Multicomputer	Covered	
03	09/08/2018	Multivector and SIMD Computers ,PRAM and VLSI Model	Covered	
04	11/08/2018	Program and Network Properties ,Conditions of Parallelism	Covered	
05	13/08/2018	Program Partitioning and Scheduling, Program Flow Mechanisms	Covered	
06	16/08/2018	System Interconnect Architectures, Principles of Scalable Performanc	Covered	
07	18/08/2018	Performance Metrics and Measures	Covered	
08	20/08/2018	Parallel Processing Applications	Covered	
09	23/08/2018	Speedup Performance Laws	Covered	
10	25/08/2018	Scalability Analysis and Approaches	Covered	
		MODULE II Hardware Technologies		
11	27/08/2018	Processors and Memory Hierarchy	Covered	
12	29/08/2018	Processors and Memory Hierarchy Contd.,	Covered	
13	30/08/2018	Advanced Processor Technology	Covered	
14	01/09/2018	Advanced Processor Technology Contd.,	Covered	
15	03/09/2018	Superscalar and Vector Processors	Covered	
16	05/09/2018	Superscalar and Vector Processors Contd.,	Covered	
17	06/09/2018	Memory Hierarchy Technology	Covered	
18	08/09/2018	Memory Hierarchy Technology Contd.,	Covered	
19	10/09/2018	Virtual Memory Technology	Covered	
20	12/09/2018	Virtual Memory Technology Contd.,	Covered	
		MODULE II Hardware Technologies		
21	15/09/2018	Bus, Cache, and Shared Memory	Covered	
22	17/09/2018	Bus Systems ,Cache Memory Organizations	Covered	
23	19/09/2018	Shared Memory Organizations	Covered	
24	26/09/2018	Sequential and Weak Consistency Models	Covered	
25	27/09/2018	Pipelining and Superscalar Techniques	Covered	
26	29/09/2018	Pipelining and Superscalar Techniques Contd.,	Covered	
27	01/10/2018	Linear Pipeline Processors	Covered	
28	03/10/2018	Nonlinear Pipeline Processors	Covered	
29	04/10/2018	Instruction Pipeline Design	Covered	
30	06/10/2018	Arithmetic Pipeline Design	Covered	

SIET / CSE / 2018 - 2019/ WEF: 06/08/2018

Academic Year 2018-19 (ODD Sem)

LECTURE PLAN

Cover Page: Course Overview
Semester: VII Semester Year: 2018-2019

Course Title: **Advanced Computer Architectures**	*Course Code:* **15CS72**
Total contact Hours: **52**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Mr.Venugopal D**	*Date:* **04/08/2018**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **06/08/2018**

Objectives:

This course :

- Provides an exposure to current and emerging trends in Computer Architectures.
- The emphasis is on studying and analyzing fundamental issues in architecture design and their impact on performance.
- Focuses on advanced computer architectures and low-level system software such as pipelined and Multiprocessor systems.

Outcomes:

The student should be able to:

- Understand the advanced concepts of computer architecture.
- Investigating modern design structures of Pipelined and Multiprocessors systems.
- Become acquainted with recent computer architectures and I/O devices, as well as the low-level language required to drive/manage these types of advanced hardware.

Pearson Education India. (**ISBN:**978-9332575271) **Reference Books:**

1) Robin Nixon, "Learning PHP, MySQL &JavaScript with jQuery, CSS and HTML5", 4thEdition, O'Reilly Publications, 2015. (ISBN:978-9352130153)

2) Luke Welling, Laura Thomson, **"PHP and MySQL Web Development"**, 5th Edition, Pearson Education, 2016. (**ISBN:**978-9332582736)

3) Nicholas C Zakas, **"Professional JavaScript for Web Developers"**, 3rd Edition, Wrox/Wiley India, 2012. (**ISBN:**978-8126535088)

4) David Sawyer Mcfarland, **"JavaScript & jQuery: The Missing Manual"**, 1st Edition, O'Reilly/Shroff Publishers & Distributors Pvt Ltd, 2014 (**ISBN:**978-9351108078)

5) Zak Ruvalcaba Anne Boehm, **"Murach's HTML5 and CSS3"**, 3rdEdition, Murachs/Shroff Publishers & Distributors Pvt Ltd, 2016. (**ISBN:**978-93552133246)

Mr. Renukaradhya P C
Staff-Incharge

Prof. C V Shashmuka Swamy
Head, Dept of CSE

Dr. T Hemadri Naidu
Principal

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26	25-09-18	Syntax, JavaScript Objects	Covered	
27	26-09-18	The Document Object Model (DOM), JavaScript Events, Forms	Covered	
28	29-09-18	Introduction to Server-Side Development with PHP	Covered	
29	01-10-18	What is Server-Side Development	Covered	
30	03-10-18	A Web Server's Responsibilities	Covered	
31		Quick Tour of PHP	Covered	
32	06-10-18	Program Control	Covered	
33	09-10-18	Functions	Covered	
34	10-10-18	**Module – 4:** PHP Arrays and Superglobals	Covered	
35	13-10-18	Arrays, $_GET and $_POST Superglobal Arrays	Covered	
36	15-10-18	$_SERVER Array, $_Files Array	Covered	
37	16-10-18	Reading/Writing Files, PHP Classes and Objects	Covered	
38	17-10-18	Object-Oriented Overview	Covered	
39	20-10-18	Classes and Objects in PHP	Covered	
40	20-10-18	Object Oriented Design,	Covered	
41	22-10-18	Error Handling and Validation	Covered	
42	23-10-18	What are Errors and Exceptions?,	Covered	
43	27-10-18	PHP Error Reporting	Covered	
44	03-11-18	PHP Error and Exception Handling	Covered	
45	05-11-18	**Module – 5** Managing State, The Problem of State in Web Applications	Covered	
46	07-11-18	Passing Information via Query String	Covered	
47	10-11-18	Passing Information via the URL Path, Cookies, Serialization	Covered	
48	12-11-18	Session State, HTML5 Web Storage	Covered	
49	13-11-18	Caching, Advanced JavaScript and jQuery	Covered	
50	14-11-18	JavaScript Pseudo-Classes, jQuery Foundations	Covered	
51	17-11-18	AJAX, Asynchronous File Transmission	Covered	
52	19-11-18	Animation,	Covered	
53	20-11-18	Backbone MVC Frameworks	Covered	
54	24-11-18	XML Processing and Web Services	Covered	
55	01-12-18	XML Processing, JSON,	Covered	
56	03-12-18	Overview of Web Services.	Covered	

Text Books:

1. Randy Connolly, Ricardo Hoar, **"Fundamentals of Web Development"**, 1stEdition,

SL No	DATE	TOPIC NAMES	TOPICS COVERED	REMARKS
1	06-08-18	**Module-1:** Introduction to HTML, What is HTML and Where did it come from?,	Covered	
2	07-08-18	HTML Syntax, Semantic Markup, Structure of HTML Documents	Covered	
3	08-08-18	Quick Tour of HTML Elements	Covered	
4	11-08-18	HTML5 Semantic Structure Elements	Covered	
5	13-08-18	Introduction to CSS,	Covered	
6	14-08-18	What is CSS, CSS Syntax	Covered	
7	18-08-18	Location of Styles,	Covered	
8	20-08-18	Selectors	Covered	
9	21-08-18	The Cascade: How Styles Interact	covered	
10	25-08-18	The Box Model	Covered	
11	27-08-18	CSS Text Styling	covered	
			Covered	
12	28-08-18	**Module – 2:** HTML Tables	covered	
13	29-08-18	Forms, Introducing Tables	Covered	
14	01-09-18	Styling Tables	covered	
15	03-09-18	Introducing Forms, Form Control Elements, Table and Form Accessibility	covered	
16	04-09-18	Microformats	Covered	
17	05-09-18	Advanced CSS: Layout, Normal Flow	covered	
18	08-09-18	Positioning Elements, Floating Elements	Covered	
19	10-09-18	Constructing Multicolumn Layouts	covered	
20	11-09-18	Approaches to CSS Layout	covered	
21	12-09-18	Responsive Design	Covered	
22	15-09-18	CSS Frameworks	Covered	
23	17-09-18	**Module – 3:** JavaScript: Client-Side Scripting	covered	
24	18-09-18	What is JavaScript and What can it do?,	Covered	
25	19-09-18	JavaScript Design Principles, Where does JavaScript Go?,	Covered	

COURSE LECTURE PLAN

Semester: VII **Year: 2018-2019**

Course Title: Web Technology and Its Applications	**Course Code: 15CS71**
Total contact Hours: 55	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 20
Lesson plan author: Mr Renukaradhya P C	Date: 30/07/2018
Checked by: Prof. C V Shanmuka Swamy	Date: 30/07/2018

OBJECTIVES

- To understand the technology and protocols underlying the World Wide Web(WWW)
- To become familiar with common tools and techniques for developing Web-based applications, both client-side and server-side.
- To develop a working knowledge of HTML,XHTML,JavaScript,Java,Perl and PHP as languages for developing Web applications
- To know the use of Cascading Style sheet in creating document server-Browser communications.
- To understand XML concepts, CGI concepts, and Perl.

OUTCOMES

- Define HTML and CSS syntax and semantics to build web pages.
- Understand the concepts of Construct , visually format tables and forms using HTML using CSS
- Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.
- List the principles of object oriented development using PHP
- Illustrate JavaScript frameworks like jQuery and Backbone which facilitates

50	15/11/2018	Providing Multiple Classes of Service, Diffserv	Covered	
51	16/11/2018	Per-Connection Quality-of-Service (QoS) Guarantees: Resource Reservation and Call Admission	Covered	
52	17/11/2018	Revision	Covered	
53	20/11/2018	Previous Question Paper Discussion	covered	
54	22/11/2018	Previous Question Paper Discussion	Covered	
55	23/11/2018	Previous Question Paper Discussion	Covered	
56	24/11/2018	Previous Question Paper Discussion	covered	
57	30/11/2018	Previous Question Paper Discussion	covered	

Text Books:

1. James F Kurose and Keith W Ross, Computer Networking, A Top-Down Approach, Sixth edition, Pearson,2017

Reference Books:

1. Behrouz A Forouzan, Data and Communications and Networking, Fifth Edition, McGraw Hill, Indian Edition
2. Larry L Peterson and Bruuce S Davie, Computer Networks, fifth edition, ELSEVIER
3. Andrew S Tanenbaum, Computer Networks, fifth edition, Pearson Mayank Dave, Computer Networks, Second edition, Cengage Learning
4. David E. Culler, Jaswinder Pal Singh, Anoop Gupta: Parallel Computer Architecture, A Hardware / Software Approach, Morgan Kaufman, 1999.

[Mrs. Prathibha T S]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr.T. Hemadri Naidu]
Principal

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20	04/09/2018	Connection-Oriented Transport TCP: The TCP Connection, TCP Segment Structure.	Covered	
21	06/09/2018	Round-Trip Time Estimation and Timeout. Reliable Data Transfer	Covered	
22	07/09/2018	Flow Control, TCP Connection Management	Covered	
23	08/09/2018	Principles of Congestion Control: The Causes and the Costs of Congestion	Covered	
24	11/09/2018	Approaches to Congestion Control, Network-assisted congestion-control example	Covered	
25	14/09/2018	ATM ABR Congestion control, TCP Congestion Control: Fairness.	Covered	
Module -3 : The Network Layer				
26	15/09/2018	What's Inside a Router?: Input Processing, Switching, Output Processing,	Covered	
27	18/09/2018	Where Does Queuing Occur? Routing control plane.	Covered	
28	25/09/2018	IPv6,A Brief foray into IP Security,	Covered	
29	27/09/2018	Routing Algorithms: The Link-State (LS) Routing Algorithm,	Covered	
30	28/09/2018	The Distance-Vector (DV) Routing Algorithm, Hierarchical Routing.	Covered	
31	29/09/2018	Routing in the Internet, Intra-AS Routing in the Internet: RIP.	Covered	
32	04/10/2018	Intra-AS Routing in the Internet: OSPF,	Covered	
33	05/10/2018	Inter/AS Routing: BGP,	Covered	
34	06/10/2018	Broadcast Routing Algorithms and Multicast.	Covered	
Module -4 : Wireless and Mobile Networks				
35	09/10/2018	Cellular Internet Access: An Overview of Cellular Network Architecture	Covered	
36	11/10/2018	3G Cellular Data Networks: Extending the Internet to Cellular subscribers	Covered	
37	12/10/2018	On to 4G:LTE,Mobility management: Principles, Addressing	Covered	
38	13/10/2018	Routing to a mobile node, Mobile IP	Covered	
39	16/10/2018	Managing mobility in cellular Networks,	Covered	
40	20/10/2018	Routing calls to a Mobile user,	Covered	
41	23/10/2018	Handoffs in GSM	Covered	
42	25/10/2018	Wireless and Mobility: Impact on Higher-layer protocols.	Covered	
Module -5 : Multimedia Networking				
43	26/10/2018	Properties of video, properties of Audio	Covered	
44	27/10/2018	Types of multimedia Network Applications	Covered	
45	02/11/2018	Streaming stored video: UDP Streaming,	Covered	
46	03/11/2018	HTTP Streaming	Covered	
47	09/11/2018	Adaptive streaming and DASH, content distribution Networks,	Covered	
48	10/11/2018	case studies: Netflix, You Tube and Kankan.	Covered	
49	13/11/2018	Network Support for Multimedia: Dimensioning Best-Effort Networks	Covered	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

Staff: Mrs. Prathibha T S **Class: V Sem**

Course Name : Computer Networks **Course Code: 15CS52**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
Module – 1 : Application Layer				
01	02/08/2018	Principles of Network Applications: Network Application Architectures,	Covered	
02	03/08/2018	Processes Communicating, Transport Services Available to Applications	Covered	
03	04/08/2018	Transport Services Provided by the Internet, Application-Layer Protocols.	Covered	
04	07/08/2018	The Web and HTTP: Overview of HTTP	covered	
05	09/08/2018	Non-persistent and Persistent Connections.	Covered	
06	10/08/2018	HTTP Message Format	Covered	
07	11/08/2018	User-Server Interaction: Cookies, Web Caching, The Conditional GET	Covered	
08	14/08/2018	File Transfer: FTP Commands & Replies,	Covered	
09	16/08/2018	Electronic Mail in the Internet: SMTP Comparison with HTTP	Covered	
10	17/08/2018	Mail Message Format, Mail Access Protocols,	covered	
11	18/08/2018	DNS :The Internet's Directory Service: Services Provided by DNS	Covered	
12	21/08/2018	Overview of How DNS Works, DNS Records and Messages	Covered	
13	23/08/2018	Peer-to-Peer Applications: P2P File Distribution, Distributed Hash Tables, Socket Programming: creating Network Applications	Covered	
14	24/08/2018	Socket Programming with UDP, Socket Programming with TCP	Covered	
Module -2 : Transport Layer				
15	25/08/2018	Introduction and Transport-Layer Services: Relationship.	Covered	
16	28/08/2018	Between Transport and Network Layers, Overview of the Transport Layer in the Internet	Covered	
17	30/08/2018	Multiplexing and Demultiplexing: Connectionless Transport: UDP,UDP Segment Structure	Covered	
18	31/08/2018	UDP Checksum, Principles of Reliable Data Transfer, Building a Reliable Data Transfer Protocol	Covered	
19	01/09/2018	Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat	Covered	

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Sira Road, Tumkur – 572 106. Karnataka.

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

Academic Year 2018-19 (ODD Sem)

LECTURE PLAN

***Cover Page:* Course Overview**
Semester: V Semester **Year: 2018-2019**

Course Title: **Computer Networks**	*Course Code:* **15CS52**
Total contact Hours: **57**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Mrs. Prathibha T S**	*Date:* **01/08/2018**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **01/08/2018**

Objectives:

This course :

- Provides an exposure to current and emerging trends in Computer Architectures.
- The emphasis is on studying and analyzing fundamental issues in architecture design and their impact on performance.
- Focuses on advanced computer architectures and low-level system software such as pipelined and Multiprocessor systems.

Outcomes:

The student should be able to:

- Understand the advanced concepts of computer architecture.
- Investigating modern design structures of Pipelined and Multiprocessors systems.
- Become acquainted with recent computer architectures and I/O devices, as well as the low-level language required to drive/manage these types of advanced hardware.

23	12/09/18	Techniques for Parallel Computation with Threads, Multithreading with Aneka,	covered	
24	15/09/18	Introducing the Thread Programming Model, Aneka Thread vs. Common Threads,	covered	
25	17/09/18	Programming Applications with Aneka Threads, Aneka Threads Application Model,	Covered	
26	19/09/18	Domain Decomposition: Matrix Multiplication, Functional Decomposition: Sine, Cosine, and Tangent.	Covered	
27	26/09/18	High-Throughput Computing: Task Programming, Task Computing, Characterizing a Task, Computing Categories, Frameworks for Task Computing,	Covered	
28	27/09/18	Task-based Application Models, Embarrassingly Parallel Applications, Parameter Sweep Applications,	Covered	
29	29/09/18	MPI Applications, Workflow Applications with Task Dependencies, Aneka Task-Based Programming,	Covered	
30	01/10/18	Task Programming Model, Developing Applications with the Task Model, Developing Parameter Sweep Application, Managing Workflows.	Covered	
31	03/10/18	**MODULE 4:** Data Intensive Computing:	Covered	
32	04/10/18	Map-Reduce Programming,	Covered	
33	06/10/18	What is Data-Intensive Computing?,	Covered	
34	10/10/18	Characterizing Data-Intensive Computations,	Covered	
35	11/10/18	Challenges Ahead, Historical Perspective,	Covered	
36	13/10/18	Technologies for Data-Intensive Computing,	Covered	
37	15/10/18	Storage Systems, Programming Platforms,	Covered	
38	17/10/18	Aneka MapReduce Programming,	Covered	
39	20/10/18	Introducing the MapReduce Programming Model,	Covered	
40	22/10/18	Example Application	Covered	
41	25/10/18	**MODULE 5:** Cloud Platforms in Industry, Amazon Web Services, Compute Services,	Covered	
42	27/10/18	Storage Services, Communication Services,	Covered	
43	03/11/18	Additional Services, Google AppEngine,	Covered	
44	05/11/18	Architecture and Core Concepts, Application Life-Cycle,	Covered	
45	07/11/18	Cost Model, Observations, Microsoft Azure,	Covered	
46	10/11/18	Azure Core Concepts, SQL Azure,	Covered	
47	12/11/18	Windows Azure Platform Appliance.	Covered	
48	14/11/18	Cloud Applications Scientific Applications,	Covered	
49	15/11/18	Healthcare: ECG Analysis in the Cloud, , Social Networking,	Covered	
50	17/11/18	Media Applications, Multiplayer Online Gaming.	Covered	
51	19/11/18	Question paper discussion	Covered	
52	22/11/2018	Question paper discussion	Covered	
53	24/11/2018	Question paper discussion	Covered	

Text Books:

1. Rajkumar Buyya, Christian Vecchiola, and Thamarai Selvi Mastering Cloud. Computing McGraw Hill.

[Mr. Basavesha.D]
Staff Incharge

[Prof. C.V.Shanmuka Swamy]
Head, Dept of CSE

[Dr T Hemadri Naidu]
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

COURSE PLAN

Name of the Course Instructor: Mr. Basavesha D **Course Code:** 15CS565

Course: Cloud Computing **Class:** VSEM

Sl. No	Date	Topic	Topics Covered	Remarks
1	01/08/18	**MODULE 1:** Introduction ,Cloud Computing at a Glance, The Vision of Cloud Computing,	Covered	
2	02/08/18	Defining a Cloud, A Closer Look, Cloud Computing Reference Model, Characteristics and Benefits,	Covered	
3	04/08/18	Challenges Ahead, Historical Developments, Distributed Systems,	Covered	
4	06/08/18	Virtualization, Web 2.0, Service-Oriented Computing, Utility-Oriented Computing,	Covered	
5	08/08/18	Building Cloud Computing Environments, Application Development,	Covered	
6	09/08/18	Infrastructure and System Development, Computing Platforms and Technologies,	Covered	
7	11/08/18	Amazon Web Services (AWS), Google AppEngine, Microsoft Azure, Hadoop, Force.com Salesforce.com,	Covered	
8	13/08/18	Manjrasoft Aneka Virtualization, Introduction, Characteristics of Virtualized,	Covered	
9	16/08/18	Environments Taxonomy of Virtualization Techniques, Execution Virtualization,	Covered	
10	18/08/18	Other Types of Virtualization,	Covered	
11	20/08/18	**MODULE 2:** Cloud Computing Architecture, Introduction, Cloud Reference Model, Architecture,	Covered	
12	23/08/18	Infrastructure / Hardware as a Service, Platform as a Service, Software as a Service,	Covered	
13	25/08/18	Types of Clouds, Public Clouds, Private Clouds, Hybrid Clouds, Community Clouds,	Covered	
14	27/08/18	Economics of the Cloud, Open Challenges,	Covered	
15	29/08/18	Cloud Definition, Cloud Interoperability and Standards Scalability and Fault Tolerance Security,	Covered	
16	30/08/18	Trust, and Privacy Organizational Aspects Aneka: Cloud Application Platform, Framework Overview,	Covered	
17	01/09/18	Anatomy of the Aneka Container, From the Ground Up: Platform Abstraction Layer, Fabric Services,	Covered	
18	03/09/18	foundation Services, Application Services, Building Aneka Clouds, Infrastructure Organization,	Covered	
19	05/09/18	Logical Organization, Private Cloud Deployment Mode, Public Cloud Deployment Mode,	Covered	
20	06/09/18	Hybrid Cloud Deployment Mode, Cloud Programming and Management, Aneka SDK, Management Tools	Covered	
21	08/09/18	**MODULE 3:** Coecurrent Computing: Thread Programming, Introducing Parallelism for Single Machine Computation,	Covered	
22	10/09/18	Programming Applications with Threads, What is a Thread?, Thread APIs,	Covered	

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COURSE PLAN

Name of the Staff: Mrs. VEENA N D
Course Name: Discrete mathematical Structure

Course Code: 18CS36
Class: III SEM

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		MODULE-1		
01	26/07/2019	**Fundamentals of Logic**: Basic Connectives		
02	29/07/2019	Truth Tables		
03	30/07/2019	Logic Equivalence		
04	31/07/2019	Logic Equivalence contd..		
05	02/08/2019	The Laws of Logic,		
06	05/08/2019	The Laws of Logic contd..		
07	06/08/2019	Logical Implication – Rules of Inference.		
08	07/08/2019	Logical Implication – Rules of Inference. Contd....		
09	09/08/2019	The Use of Quantifiers, Quantifiers		
10	13/08/2019	Definitions and Proofs of theorem.		
		MODULE-2		
11	14/08/2019	**Properties of the Integers**		
12	16/08/2019	Mathematical Induction		
13	19/08/2019	Mathematical Induction examples		
14	20/08/2019	The Well Ordering Principle Mathematical Induction		
15	21/08/2019	mathematical induction contd...		
16	23/08/2019	Recursive Definitions		
17	26/08/2019	**Fundamental Principles of Counting:** The Rules of Sum and Product		
18	27/08/2019	Permutations		
19	28/08/2019	Combinations – The Binomial Theorem		
20	30/08/2019	Combinations with Repetition		
		MODULE-3		
21	03/09/2019	**Relations&Functions**:Cartesian Products of Relations		
22	04/09/2019	Functions – Plain and One-to-One, Onto Functions		
23	09/09/2019	The Pigeon-hole Principle		
24	11/09/2019	Function Composition and Inverse Functions		
25	13/09/2019	Properties of relations		
26	16/09/2019	Computer Recognition		
27	17/09/2019	Zero-One Matrices		
28	18/09/2019	Directed Graphs		
29	20/09/2019	Partial Orders – Hasse Diagrams		
30	23/09/2019	Equivalence Relations, Partitions		
		MODULE-4		
31	24/09/2019	**The Principle of Inclusion and Exclusion**: The Principle of Inclusion and Exclusion		
32	25/09/2019	Generalizations of the Principle		
33	27/09/2019	Generalizations of the Principle contd...		

COURSE PLAN

Cover Page: Course Overview
Semester: III Semester

Year: 2019-20

Course Title: Discrete Mathematical Structures	*Course Code:* 18CS36
Total contact Hours: 39	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
Course plan author: Mrs.Veena N D	*Date:* 25/07/2019
Checked by: Prof.C.V. Shanmukaswamy	*Date:* 25/07/2019

Prerequisites: Set theory, graphs, concepts of Integers.
Course Objectives: This course will enable students to

- Understand theoretical foundations of computer science to perceive other courses in the programme.
- Illustrate applications of discrete structures: logic, relations, functions, set theory and counting.
- Describe different mathematical proof techniques.
- Illustrate the importance of graph theory in computer science

Course Outcomes:
The student should be able to

- Use propositional and predicate logic in knowledge representation and truth verification.
- Demonstrate the application of discrete structures in different fields of computer science.
- Solve problems using recurrence relations and generating functions.
- Application of different mathematical proofs techniques in proving theorems in the courses.
- Compare graphs, trees and their applications.

33	27/09/2019	Generalizations of the Principle contd.	
34	30/09/2019	Derangements – Nothing is in its Right Place	
35	01/10/2019	Rook Polynomials	
36	04/10/2019	Rook Polynomials contd.	
37	09/10/2019	**Recurrence Relations:** First Order Linear Recurrence Relation	
38	11/10/2019	First Order Linear Recurrence Relation contd.	
39	18/10/2019	The Second Order Linear Homogeneous Recurrence Relation with Constant Coefficients	
40	21/10/2019	The Second Order Linear Homogeneous Recurrence Relation with Constant Coefficients contd.	
		MODULE-5	
41	22/10/2019	**Introduction to Graph Theory**: Definitions and Example	
42	23/10/2019	Sub graphs	
43	25/10/2019	Complements	
44	28/10/2019	Graph Isomorphism	
45	30/10/2019	Vertex Degree	
46	04/11/2019	Euler Trails and Circuits	
47	05/11/2019	**Trees**: Definitions	
48	06/11/2019	Properties and Examples	
49	08/11/2019	Rooted Trees, Trees and Sorting	
50	11/11/2019	Weighted Trees, Prefix Codes	
51	12/11/2019	Revision	
52	13/11/2019	Revision	
53	18/11/2019	Revision	
54	19/11/2019	Revision	
55	20/11/2019	Revision	
56	25/11/2019	Revision	
57	26/11/2019	Question paper discussion	
58	27/11/2019	Question paper discussion	
59	29/11/2019	Question paper discussion	

Text Books:

1. Ralph P. Grimaldi: Discrete and Combinatorial Mathematics, 5th Edition, Pearson Education, 2004. **Ch 2, Ch 4: 4.1, 4.2, Ch 5:5.1 to 5.3, 5.5, 5.6, Ch 7: 7.1 to 7.4, Ch 8: 8.1 to 8.4, Ch 10: 10.1 to 10.2, Ch 11: 11.1 to 11.3, Ch 12: 12.1 to 12.4.**

Reference Books:

1. Basavaraj S Anami and Venakanna S Madalli: Discrete Mathematics – A Concept based approach, Universities Press, 2016
2. Kenneth H. Rosen: Discrete Mathematics and its Applications, 6th Edition, McGraw Hill.
3. Jayant Ganguly: A Treatise on Discrete Mathematical Structures, Sanguine-Pearson, 2010.
4. D.S. Malik and M.K. Sen: Discrete Mathematical Structures: Theory and Applications, Thomson, 2004.
5. Thomas Koshy: Discrete Mathematics with Applications, Elsevier, 2005, Reprint 2008.

[Mrs.Veena N D]
Staff Incharge

[Prof.C. Srinivasa Swamy]
Head, Dept. of CSE

[Dr.T.Hemadri Naidu]
PRINCIPAL

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMAKURU-06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2019-20 (ODD SEM)

COURSE PLAN

Name of the Staff: Mr.Suthan R
Course : Software engineering

Class: III
Course Code: 18CS35

Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	25/07/19	**MODULE-1**: **Introduction**: Software Crisis,	Covered	
02	26/07/19	Need for Software Engineering, Professional Software Development,	Covered	
03	29/07/19	Software Engineering Ethics, Case Studies.	Covered	
04	30/07/19	**Software Processes**: Models: Waterfall Model	Covered	
05	01/08/19	Incremental Model and Spiral Model	Covered	
06	02/08/19	Process activities	Covered	
07	05/08/19	**Requirements Engineering**: Requirements Engineering Processes	Covered	
08	06/08/19	Requirements Elicitation and Analysis	Covered	
09	08/08/19	Functional and non-functional requirements	Covered	
10	09/08/19	The software Requirements Document	Covered	
11	12/08/19	Requirements Specification, Requirements validation	Covered	
12	13/08/19	Requirements Management	Covered	
			Revised	
			Covered	
13	16/08/19	**MODULE-2**: What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development;	Covered	
14	19/08/19	OO modelling history, Modelling as Design technique:	Covered	
15	20/08/19	Modelling; abstraction; The Three models. **Introduction, Modelling Concepts and Class Modelling:**	Covered	
16	22/08/19	What is Object orientation? What is OO development? OO Themes	Covered	
17	23/08/19	Evidence for usefulness of OO development;	Covered	
18	26/08/19	OO modelling history.	Covered	
19	27/08/19	Modelling as Design technique:	Covered	
20	29/08/19	Modelling; abstraction; The Three models. Class Modelling:	Covered	
21	30/08/19	Object and Class Concept; Link and associations concepts	Covered	
22	03/09/19	Generalization and Inheritance;	Covered	
23	09/09/19	A sample class model	Covered	
24	12/09/19	Navigation of class models;	Covered	
25	13/09/19	**MODULE-3**: **System Models**: Context models , Interaction models	Covered	
26	16/09/19	Structural models	Covered	
27	17/09/19	Behavioral models	Covered	
28	19/09/19	Model-driven engineering.	Covered	
29	20/09/19	**Design and Implementation**: Introduction to RUP	Covered	
30	23/09/19	RUP Contin....	Covered	
31	24/09/19	Design Principles.	Covered	
32	26/09/19	Object-oriented design using the UML	Covered	
33	27/09/19	Design patterns	Covered	
34	30/09/19	Implementation issues	Covered	
35	01/10/19	Open source development	Covered	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE LECTURE PLAN

Name of the Staff: Mr.Suthan R
Course: Software Engineering

Course Code: 18CS35
Class: III

Course Title: Software Engineering	*Course Code:* 18CS35
Total contact Hours: 55	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
Lesson plan author: Mr Suthan R	*Date:24/07/2019*
Checked by: Prof. C V Shanmukaswamy	*Date:24/07/2019*

Course objectives: This course will enable students to

- Outline software engineering principles and activities involved in building large software programs
- Identify ethical and professional issues and explain why they are of concern to software engineers
- Describe the process of requirements gathering, requirements classification, requirements specification and requirements validation.
- Differentiate system models, use UML diagrams and apply design patterns.
- Discuss the distinctions between validation testing and defect testing.
- Recognize the importance of software maintenance and describe the intricacies involved in software evolution
- Apply estimation techniques, schedule project activities and compute pricing.
- Identify software quality parameters and quantify software using measurements and metrics.
- List software quality standards and outline the practices involved.
- Recognize the need for agile software development, describe agile methods, apply agile practices and plan for agility

Course outcomes: After studying this course, students will be able to:

- Design a software system, component, or process to meet desired needs within realistic constraints
- Assess professional and ethical responsibility
- Function on multi-disciplinary teams
- Use the techniques, skills, and modern engineering tools necessary for engineering practice
- Analyze, design, implement, verify, validate, implement, apply, and maintain software systems or parts of software systems.

36	03/10/19	**Module 4: Software Testing**: Development testing.	Covered
37	04/10/19	Test-driven development	Covered
38	07/10/19	Release testing .	Covered
39	08/10/19	User testing	Covered
40	10/10/19	Test Automation	Covered
41	11/10/19	**Software Evolution**: Evolution processes	Covered
42	18/10/19	Program evolution dynamics	Covered
43	21/10/19	Software maintenance	Covered
44	22/10/19	Legacy system management	Covered
			Covered
45	25/10/19	**MODULE-4 Project Planning**: Software pricing	Covered
46	29/10/19	Plan-driven development	Covered
47	31/10/19	Project scheduling	Covered
48	04/11/19	Estimation techniques	Covered
49	05/11/19	Estimation techniques Continued...	Covered
50	07/11/19	**Quality management**: Software quality	Covered
51	12/11/19	Reviews and inspections	Covered
52	18/11/19	Software measurement and metrics	Covered
53	19/11/19	Software standards	Covered
54	26/11/19	Revision	Covered
55	28/11/19	Revision	Covered
			Covered

TEXT BOOKS:

1. Ian Sommerville: Software Engineering, 9th Edition, Pearson Education, 2012.
   (Listed topics only from Chapters 1,2,3,4, 5, 7, 8, 9, 23, and 24)
2. The SCRUM Primer, Ver 2.0, http://www.goodagile.com/scrumprimer/scrumprimer20.pdf

REFERENCE BOOKS

1. Roger S. Pressman: Software Engineering-A Practitioners approach, 7th Edition, TataMcGraw Hill.
2. Pankaj Jalote: An Integrated Approach to Software Engineering, Wiley India

Web Reference for eBooks on Agile:

1. http://agilemanifesto.org/
2. http://www.jamesshore.com/Agile-Book/

[Mr. Suthan R]
Staff Incharge

[Prof. C V Shanmukhaswamy]
HOD, CSE

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Shridevi Institute of Engineering and Technology-Tumakuru-06
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2019-20(ODD Semester)

COURSE LECTURE PLAN

***Cover Page*: Course Overview**
***Semester* : III** **Year: 2019-2020**

Course Title: **Computer Organization**	*Subject Code:* **18CS34**
Total contact Hours: 61	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
Lesson plan author: Prof. Chethan M S	*Date:* 25/07/2019
Checked by: Prof. C V Shanmukaswamy	*Date:* 25/07/2019

Course objectives:

This course will enable students to

- Explain the basic sub systems of a computer, their organization, structure and operation.
- Illustrate the concept of programs as sequences of machine instructions.
- Demonstrate different ways of communicating with I/O devices and standard I/O interfaces.
- Describe memory hierarchy and concept of virtual memory.
- Describe arithmetic and logical operations with integer and floating-point operands. Illustrate organization of a simple processor, pipelined processor and other computing systems

Course outcomes:

After studying this course, students will be able to:

- Explain the basic organization of a computer system.
- Demonstrate functioning of different sub systems, such as processor, Input/output,and memory.
- Illustrate hardwired control and micro programmed control, pipelining, embedded and other computing systems.
- Design and analyze simple arithmetic and logical units.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	25/07/19	**MODULE-1. Basic Structure of Computers**: Basic Operational Concepts, Bus Structures,	Covered	
02	26/07/19	Performance – Processor Clock, Basic Performance Equation,	Covered	
03	27/07/19	Clock Rate, Performance Measurement	Covered	
04	30/07/19	**Machine Instructions and Programs**: Memory Location and Addresses	Covered	
05	01/08/19	Memory Operations, Instructions and Instruction Sequencing	Covered	
06	02/08/19	Instructions and Instruction Sequencing Continue……	Covered	
07	03/08/19	Addressing Modes,	Covered	
08	06/08/19	Addressing Modes Continue….	Covered	
09	08/08/19	Assembly Language, Basic Input and Output Operations	Covered	
10	09/08/19	Basic Input and Output Operations Contd., Stacks and Queues,	Covered	
11	10/08/19	Stacks and Queues Contd….	Covered	
12	13/08/19	Subroutines, Additional Instructions	Covered	
13	16/08/19	Additional Instructions Contd…, Encoding of Machine Instructions	Covered	
14	17/08/19	Encoding of Machine Instructions Contd……	Covered	
15	20/08/19	**MODULE-2. Input/output Organization**: Accessing I/O Devices	Covered	
16	22/08/19	Interrupts – Interrupt Hardware	Covered	
19	23/08/19	Enabling and Disabling Interrupts	Covered	
19	24/08/19	Handling Multiple Devices	Covered	
19	27/08/19	Controlling Device Requests, Exceptions,	Covered	
20	29/08/19	Direct Memory Access, Buses	Covered	
21	30/08/19	Buses Contd….	Covered	
22	31/08/19	Interface Circuits	Covered	
23	03/09/19	Interface Circuits Contd.,	Covered	
24	12/09/19	Standard I/O Interfaces	Covered	
25	13/09/19	Standard I/O Interfaces Contd., PCI Bus	Covered	
26	14/09/19	Standard I/O Interfaces Contd., SCSI Bus	Covered	
27	17/09/19	SCSI Bus Contd., USB	Covered	
28	19/09/19	USB continued…	Covered	
29	20/09/19	USB continued…	Covered	
30	21/09/19	**MODULE-3. Memory System** : Basic concepts,	Covered	
31	24/09/19	Semiconductor RAM Memories	Covered	
32	26/09/19	Read Only Memories, Speed, Size, and Cost	Covered	
33	27/09/19	Read Only Memories, Speed, Size, and Cost Continued…	Covered	
34	01/10/19	Cache Memories-Mapping functions	Covered	
35	03/10/19	Cache Memories-Mapping functions Continued….	Covered	
36	04/10/19	Cache Memories-Mapping functions Continued….	Covered	

37	05/10/19	Replacement Algorithms,	Covered
38	10/10/19	Replacement Algorithms,	Covered
39	11/10/19	Performance Considerations Continued.....	Covered
40	12/10/19	Performance Considerations Continued.....	Covered
41	17/10/19	Performance Considerations Continued.....	Covered
			Covered
42	18/10/19	**MODULE-4. Arithmetic:** Numbers, Arithmetic Operations and Characters	Covered
43	19/10/19	Arithmetic Operations and Characters Continued...	Covered
44	22/10/19	Addition and Subtraction of Signed Numbers	Covered
45	24/10/19	Design of Fast Adders	Covered
46	25/10/19	Multiplication of Positive Numbers	Covered
47	26/10/19	Signed Operand Multiplication	Covered
48	31/10/19	Fast Multiplication	Covered
49	02/11/19	Fast Multiplication Continued...	Covered
50	05/11/19	Integer Division	Covered
51	07/11/19	Integer Division Continued...	Covered
52	08/11/19	Integer Division Continued...	Covered
53	09/11/19	**MODULE-5. Basic Processing Unit** Some Fundamental Concepts	Covered
54	12/11/19	Some Fundamental Concepts Continued.....	Covered
55	14/11/19	Execution of a Complete Instruction	Covered
56	16/11/19	Multiple Bus Organization	Covered
57	19/11/19	Hard-wired Control	Covered
58	26/11/19	Micro programmed Control	Covered
59	28/11/19	**Embedded System and Large Computer Systems:** Examples of Embedded Systems	Covered
60	29/11/19	Processor chips for embedded applications, Simple Microcontroller.	Covered
61	30/11/19	**The Structure of General-Purpose Multiprocessors**	Covered

Text Books:

1. Carl Hamacher, Zvonko Vranesic, Safwat Zaky: Computer Organization, 5th Edition, Tata McGraw Hill, 2002.

Reference Books:

1. William Stallings: Computer Organization & Architecture, 9th Edition, Pearson, 2015

Prof. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
Head, Dept of CSE

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LECTURE PLAN

Name of the Staff: Mr. Mallesh H.L. **Course Code:** 18CS33

Class: III SEM **Course:** Analog and Digital Electronics

Sl. No.	DATE	TOPIC	TOPICS COVERED	REMARKS
01	25/7/2019	Module -1 Field Effect Transistors: Photodiodes,BJT Biasing :	Covered	
02	27/7/2019	Light Emitting Diodes , and Optocouplers	Covered	
03	30/7/2019	Fixed bias ,Collector to base Bias , voltage divider bias,	Covered	
04	31/7/2019	Operational Amplifier Application Circuits: Multivibrators	Covered	
05	1/8/2019	using IC-555, Peak Detector, Schmitt trigger,	Covered	
06	3/8/2019	Active Filters, Non-Linear Amplifier,	Covered	
07	6/8/2019	Relaxation Oscillator, Current-to-Voltage and Voltage-to-Current Converter ,	Covered	
08	7/8/2019	Regulated Power Supply Parameters,	Covered	
09	8/8/2019	adjustable voltage regulator ,	Covered	
10	10/8/2019	D to A and A to D converter	Covered	
11	13/8/2019.	Revision	Covered	
12	14/8/2019	Revision	Covered	
13	17/8/2019	Module-2 Karnaugh maps: minimum forms of switching functions	Covered	
14	20/8/2019	, two and three variable Karnaugh maps,	Covered	
15	21/8/2019	four variable karnaugh maps, determination of minimum expressions using essential prime implicants,	Covered	
16	22/8/2019	Quine-McClusky Method: determination of prime implicants,	Covered	
17	24/8/2019	The prime implicant chart, petricks method	Covered	
18	27/8/2019	simplification of incompletely specified functions	Covered	
19	28/8/2019	simplification using map-entered variables	Covered	
20	29/8/2019.	Revision	Covered	

Shridevi Institute of Engineering and Technology
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester: **III Semester** **Year: 2019-2020**

Course : **Analog and Digital Electronics**	*Course Code:* **18CS33**
Total contact Hours: **62**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **60**	*Total I.A. marks:* **40**
Lesson plan author: **Mr. Mallesh H.L**	*Date:* **24/07/2019**
Checked by: **Prof C.V Shanmukaswamy**	*Date:* **24/07/2019**

Course Learning Objectives: This course (18CS33) will enable students to:
- Explain the use of photoelectronics devices, 555 timer IC, Regulator ICs and uA741 opamp IC
- Make use of simplifying techniques in the design of combinational circuits.
- Illustrate combinational and sequential digital circuits
- Demonstrate the use of flipflops and apply for registers
- Design and test counters, Analog-to-Digital and Digital-to-Analog conversion techniques.

Course Outcomes: The student will be able to :
- Design and analyze application of analog circuits using photo devices, timer IC, power supply
and regulator IC and op-amp.
- Explain the basic principles of A/D and D/A conversion circuits and develop the same.
- Simplify digital circuits using Karnaugh Map , and Quine-McCluskey Methods
- Explain Gates and flip flops and make us in designing different data processing circuits, registers
and counters and compare the types.
- Develop simple HDL programs

21	31/8/2019	Revision	Covered	
22	3/9/2019	Revision	Covered	
23	4/9/2019	Revision	Covered	
24	11/9/2019	**Module-3**Combinational circuit design and simulation using gates.	Covered	
25	12/9/2019	Review of Combinational circuit design,	Covered	
26	14/9/2019	design of circuits with limited Gate Fan-in	Covered	
27	17/9/2019	Gate delays and Timing diagrams.	Covered	
28	18/9/2019	Hazards in combinational Logic	Covered	
29	19/9/2019	simulation and testing of logic circuits	Covered	
30	21/9/2019	Multiplexers, Decoders and Programmable Logic Devices.	Covered	
31	24/9/2019	Multiplexers, three state buffers.	Covered	
32	25/9/2019	decoders and encoders.	Covered	
33	26/9/2019	Programmable Logic devices.	Covered	
34	1/10/2019	Programmable Logic Arrays.	Covered	
35	3/10/2019	Programmable Array Logic	Covered	
36	5/10/2019	**Module – 4** Introduction to VHDL	Covered	
37	9/10/2019	VHDL description of combinational circuits.	Covered	
38	10/10/2019	VHDL Models for multiplexers.	Covered	
39	12/10/2019	VHDL Modules	Covered	
40	17/10/2019	Latches and Flip-Flops	Covered	
41	19/10/2019	Set Reset Latch.	Covered	
42	22/10/2019	Gated Latches.	Covered	
43	23/10/2019	Edge-Triggered D Flip Flop	Covered	
44	24/10/2019	SR Flip Flop, J K Flip Flop,	Covered	
45	26/10/2019	T Flip Flop.	Covered	
46	30/10/2019	Flip Flop with additional inputs.	Covered	
47	31/10/2019	Asynchronous Sequential Circuits	Covered	
48	2/11/2019	**Module – 5** Registers and Counters design of Binary counters	Covered	
49	5/11/2019	Registers and Register Transfers.	Covered	
50	6/11/2019	Parallel Adder with accumulator.	Covered	
51	7/11/2019	shift registers.	Covered	
52	9/11/2019	counters for other sequences.	Covered	

53	12/11/2019	counters for other sequences.	Covered	
54	13/11/2019	counter design using SR and J K Flip Flops.	Covered	
55	14/11/2019	design of Binary counters.	Covered	
56	16/11/2019	sequential parity checker.	Covered	
57	19/11/2019	state tables and graphs	Covered	
58	20/11/2019	Question Paper Discussion	Covered	
59	26/11/2019	Question Paper Discussion	Covered	
60	27/11/2019	Question Paper Discussion	Covered	
61	28/11/2019	Question Paper Discussion	Covered	
62	30/11/2019	Question Paper Discussion		

Textbooks:

1. Charles H Roth and Larry L Kinney, Analog and Digital Electronics, Cengage Learning,2019

Reference Books:

1. Anil K Maini, Varsha Agarwal, Electronic Devices and Circuits, Wiley, 2012.

2. Donald P Leach, Albert Paul Malvino & Goutam Saha, Digital Principles and Applications, 8th Edition, Tata McGraw Hill, 2015.

3. M. Morris Mani, Digital Design, 4th Edition, Pearson Prentice Hall, 2008.

4. David A. Bell, Electronic Devices and Circuits, 5th Edition, Oxford University Press, 2008

[Mr.Mallesh H.L]
Staff Incharge

[Prof. C V Shanmukaswamy]
Head, Dept of CSE

[Dr. Narendra Viswanath]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2018-19 (Odd Sem)
Department of Computer Science & Engg.

LECTURE PLAN

Staff: Prof. C.V.Shanmuka Swamy
Course: DATA STRUCTURES AND APPLICATIONS

Class : 3rd Semester,
Course Code : 18CS32

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		Module 1:Introduction		
1	25/07/2019	Data Structures, Classifications (Primitive & Non Primitive), Data structure Operations	Covered	
2	26/07/2019	Review of Arrays, Structures,	Covered	
3	29/07/2019	Self-Referential Structures, and Unions.	Covered	
4	30/07/2019	Pointers and Dynamic Memory Allocation Functions.	Covered	
5	31/07/2019	Representation of Linear Arrays in Memory, Dynamically allocated arrays	Covered	
6	01/08/2019	**Tutorial**	Covered	
7	02/08/2019	**Tutorial**	Covered	
8	05/08/2019	**Array Operations**: Traversing, inserting, deleting, searching, and sorting	Covered	
9	06/08/2019	Multidimensional Arrays, Polynomials	Covered	
10	07/08/2019	Sparse Matrices.	Covered	
11	08/08/2019	**Strings:** Basic Terminology, Storing,	Covered	
12	09/08/2019	**Tutorial**	Covered	
13	13/08/2019	Operations on strings	Covered	
14	16/08/2019	**Tutorial**	Covered	
15	19/08/2019	Pattern Matching algorithms.	Covered	
16	20/08/2019	**Tutorial**	Covered	
17	21/08/2019	Programming Examples	Covered	
		Module 2: Stacks and Queues		
18	22/08/2019	*Stacks:* Definition, Stack Operations, Array Representation of Stacks	Covered	
19	23/08/2019	**Tutorial**	Covered	
20	26/08/2019	Stacks using Dynamic Arrays, Stack Applications: Polish notation,	Covered	
21	27/08/2019	Infix to postfix conversion, evaluation of postfix expression,	Covered	
22	28/08/2019	**Recursion** - Factorial, GCD, Fibonacci Sequence,	Covered	
23	29/08/2019	Tower of Hanoi, Ackerman's function.	Covered	
24	30/08/2019	Tutorial	Covered	
25	03/09/2019	**Queues:** Definition, Array Representation, Queue Operations,	Covered	
26	04/09/2019	Circular Queues, Circular queues using Dynamic arrays,	Covered	
27	09/09/2019	Dequeues, Priority Queues,	Covered	
28	11/09/2019	A Mazing Problem. Multiple Stacks and Queues.	Covered	
29	12/09/2019	**Tutorial**	Covered	
30	13/09/2019	**Tutorial**	Covered	
31	16/09/2019	Programming Examples	Covered	
		Module 3: Linked Lists		
32	17/09/2019	**Linked Lists** Definition, Representation of linked lists in Memory,	Covered	
33	18/09/2019	Memory allocation, Garbage Collection	Covered	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: Course Overview
Semester: III Semester

Year: 2019-20

Course Title: DATA STRUCTURES AND APPLICATIONS	Course Code: **18CS32**
Total contact Hours: **74**	Duration of Exam: 03 Hrs.
Total exam marks: **60** [100 Reduced to 60]	Total I.A. marks: **40**
Lesson plan author: **Prof. C.V.Shanmuka swamy**	Date:24 /07/2019
Checked by: **Prof. C.V.Shanmuka swamy**	Date: 24/07/2019
CREDITS – 04	

Prerequisites:
knowledge of basic concepts of C programming language.

Objectives: This course will enable students to

- Explain fundamentals of data structures and their applications essential for programming/problem
- solving
- Analyze Linear Data Structures: Stack, Queues, Lists
- Analyze Non-Linear Data Structuees: Trees, Graphs
- Analyze and Evaluate the sorting & searching algorithms
- Assess appropriate data structure during program development/Problem Solving

Outcomes: After studying this course, students will be able to:

- Acquire knowledge of
  - Various types of data structures, operations and algorithms.
  - Sorting and searching operations.
  - File structures.
- Analyse the performance of
  - Stack, Queue, Lists, Trees, Graphs, Searching and Sorting techniques.
- Implement all the applications of Data structures in a high-level language.
- Design and apply appropriate data structures for solving computing problems.

34	19/09/2019	Linked list operations: Traversing, Searching, Insertion, and Deletion.	Covered	
35	23/09/2019	Linked list operations: Traversing, Searching, Insertion, and Deletion contd.,	Covered	
36	24/09/2019	Linked list operations: Traversing, Searching, Insertion, and Deletion contd.,	Covered	
37	25/09/2019	Linked list operations: Traversing, Searching, Insertion, and Deletion contd.,	Covered	
38	26/09/2019	Doubly Linked lists	Covered	
39	27/09/2019	**Tutorial**	Covered	
40	30/09/2019	Contd... Doubly Linked lists	Covered	
41	01/10/2019	Circular linked lists, Header linked lists	Covered	
42	03/10/2019	Linked Stacks and Queues.	Covered	
43	04/10/2019	**Tutorial**	Covered	
44	09/10/2019	Applications of Linked lists-Polynomials,	Covered	
45	10/10/2019	Applications of Linked lists-Sparse Matrix Representation,	Covered	
	11/10/2019	**Tutorial**	Covered	
47	17/10/2019	Programming Examples	Covered	
48	18/10/2019	**Tutorial**	Covered	
49	21/10/2019	Programming Examples	Covered	
		Module-4 Trees:		
50	22/10/2019	**Trees**:Terminology, Binary Trees, Properties of Binary trees,	Covered	
51	23/10/2019	Array and linked Representation of Binary Trees,	Covered	
52	24/10/2019	Array and linked Representation of Binary Trees, Contd.,	Covered	
53	25/10/2019	**Tutorial**	Covered	
54	28/10/2019	Binary Tree Traversals - Inorder, postorder, preorder	Covered	
55	30/10/2019	Additional Binary tree operations.	Covered	
56	31/10/2019	Threaded binary trees,	Covered	
57	01/11/2019	Binary Search Trees – Definition,	Covered	
58	04/11/2019	Insertion, Deletion, Traversal,	Covered	
59	05/11/2019	Searching, Application of Trees, Evaluation of Expression,	Covered	
60	06/11/2019	Programming Examples	Covered	
		Module-5 Graphs		
61	07/11/2019	**Graphs**: Definitions, Terminologies, Matrix and Adjacency List Representation OfGraph	Covered	
62	08/11/2019	**Tutorial**	Covered	
63	11/11/2019	Elementary Graph operations, Traversal methods	Covered	
64	12/11/2019	Breadth First Search and Depth First Search.	Covered	
65	13/11/2019	**Sorting and Searching**: Insertion Sort, Radix sort,	Covered	
66	14/11/2019	Address Calculation Sort.	Covered	
67	18/11/2019	**Hashing:** Hash Table organizations, Hashing Functions,	Covered	
68	19/11/2019	Static and Dynamic Hashing.	Covered	
69	20/11/2019	**Files and Their Organization:** Data Hierarchy, File Attributes, Text Files and Binary Files	Covered	
70	25/11/2019	Basic File Operations, File Organizations and Indexing	Covered	
71	26/11/2019	Model Question Paper Discussion	Covered	
72	27/11/2019	**Tutorial**	Covered	
73	28/11/2019	**Tutorial**	Covered	
74	29/11/2019	**Tutorial**	Covered	

Text Books:

1. Fundamentals of Data Structures in C - **Ellis Horowitz and Sartaj Sahni**, 2nd edition, Universities Press,2014
2. Data Structures - **Seymour Lipschutz, Schaum's Outlines**, Revised 1st edition, McGraw Hill, 2014

Reference Books:

1. Data Structures: A Pseudo-code approach with C –Gilberg & Forouzan, 2nd edition, Cengage Learning,2014.
2. Data Structures using C, , Reema Thareja, 3rd edition Oxford press, 2012.
3. An Introduction to Data Structures with Applications- **Jean-Paul Tremblay & Paul G. Sorenson**, 2nd Edition, McGraw Hill, 2013.
4. Data Structures using C - A M Tenenbaum, PHI, 1989.
5. Data Structures and Program Design in C - Robert Kruse, 2nd edition, PHI, 1996.

[Prof. C.V.Shanmuka Swamy]
Staff In-charge

[Prof. C.V.Shanmuka Swamy]
Head, Dept of CSE

[Dr. Hemadri Naidu T.]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY, TUMKUR-06
(An ISO 9001-2008 Certified Institution)
DEPARTMENT OF MATHEMATICS
Academic Year 2019-20(Odd semester)

LECTURE PLAN

Name of the Staff: Dr. CHETANA C Rashmi S B
Class: III semester
Subject: Transform calculus, fourier series and numerical techniques
Subject code: 18MAT31

Department: Mathematics
Section: CSE

Course Learning Objectives:

- To have an insight into fourier series, fourier transforms, Laplace transform, difference equations and Z-transforms.
- To develop the proficiency in variational calculus and solving ODE's arising in engineering applications, using numerical methods.

Sl No	DATE	TOPICS	REMARKS
		MODULE-I: LAPLACE TRANSFORM & INVERSE LAPLACE TRANSFORM	
1	25/07/2019	Definition of Laplace Transform	
2	26/07/2019	Laplace transform of elementary functions(statements only)	
3	29/07/2019	Problems on Laplace Transforms	
4	30/07/2019	Problems continued	
5	31/07/2019	Laplace transform of Periodic functions (Statement only)	
6	01/08/2019	Problems on Laplace Transforms of Periodic functions	
7	02/08/2019	Problems continued	
8	05/08/2019	Unit step functions & Problems	
9	06/08/2019	Problems continued	
10	07/08/2019	Inverse Laplace Transforms: Definitions	
11	08/08/2019	Problems continued	
12	09/08/2019	Problems continued	
13	13/08/2019	Convolution theorem to find the inverse Laplace Transform (without Proof) & Problems	
14	14/08/2019	Problems continued	
15	16/08/2019	Problems continued	
16	19/08/2019	Solution of Linear differential equations using Laplace Transforms & Problems	
17	20/08/2019	Revision	
		MODULE-2: FOURIER SERIES	
18	21/08/2019	Periodic functions	
19	22/08/2019	Dirichlet's conditions	
20	23/08/2019	Fourier series of Periodic functions with period 2π	
21	26/08/2019	Problems continued	
22	27/08/2019	Fourier series of Periodic functions with arbitrary $2c$	
23	28/08/2019	Problems continued	
24	29/08/2019	Fourier series of even and odd functions	

25	30/08/2019	Problems continued
26	03/09/2019	Half range Fourier series expansion. Problems
27	04/09/2019	Problems continued
28	06/09/2019	Practical Harmonic Analysis. Problems
29	11/09/2019	Problems continued
30	12/09/2019	Problems continued
31	13/09/2019	Revision
MODULE 3: FOURIER TRANSFORMS, DIFFERENCE EQUATIONS AND Z-TRANSFORMS		
32	16/09/2019	**Fourier Transforms:** Infinite Fourier transforms and problems
33	17/09/2019	Problems continued
34	18/09/2019	Fourier sine and Cosine transforms
35	19/09/2019	Problems continued
36	20/09/2019	Inverse Fourier transforms
37	23/09/2019	Problems continued
38	24/09/2019	Inverse Fourier Sine and Cosine transforms
39	25/09/2019	Problems continued
40	26/09/2019	**Z-transforms:** Difference equations – basic definitions. Z- Transforms-definition, standard forms
41	27/09/2019	Damping rule, shifting rule
42	30/09/2019	Problems continued
43	01/10/2019	Initial value and Final value theorems(without proof) and problems
44	03/10/2019	Inverse Z-transforms and problems
45	04/10/2019	Problems continued
46	08/10/2019	Application of Z-transforms to solve difference equations
47	10/10/2019	Problems continued
48	11/10/2019	Revision
MODULE 4: NUMERICAL SOLUTIONS OF ORDINARY DIFFERENTIAL EQUATIONS(ODE's)		
49	17/10/2019	**Numerical solutions of ODE's of first order and first degree**
50	18/10/2019	Taylor's series and problems
51	21/10/2019	Problems continued
52	22/10/2019	Modified Euler's method and Problems
53	23/10/2019	Problems continued
54	24/10/2019	Runge – Kutta method of 4th order and problems
55	25/10/2019	Problems continued
56	28/10/2019	Milne's & Adams – Bash forth Predictor-Corrector method and Problems
57	30/10/2019	Problems continued
58	31/10/2019	Revision
MODULE 5: NUMERICAL SOLUTIONS OF SECOND ORDER ODE's & CALCULUS OF VARIATIONS		
60	04/11/2019	Runge – Kutta method of second order ODE and problems
61	05/11/2019	Problems continued
62	06/11/2019	Milne's Predictor-Corrector method and Problems

63	07.11.2019	Problems continued	
64	08.11.2019	Variation of function and functional	
65	11.11.2019	Problems continued	
66	12.11.2019	**Variational Problems**	
67	13.11.2019	Problems continued	
68	14.11.2019	Problems continued	
69	15.11.2019	Euler's Equation & Problems	
70	19.11.2019	Problems continued	
71	20.11.2019	Geodesics & Problems	
72	21.11.2019	Problems continued	
73	26.11.2019	Hanging Chain Problems	
74	27.11.2019	Problems continued	
75	28.11.2019	Revision	
76	29.11.2019	Question paper Discussion	

Course outcomes: On completion of this course, students are able to,

CO1: Use CT and inverse CT in solving differential/integral equation arising in network analysis, control systems and other fields of engineering.

CO2: Demonstrate Fourier series to study the behavior of periodic functions and their applications in system communications, digital signal processing and field theory.

CO3: Make use of Fourier Transform and Z-Transform to illustrate discrete/continuous function arising in wave and heat propagation, signals and systems.

CO4: Solve first and second order differential equations arising in engineering problems using single step and multistep numerical methods.

CO5: Determine the extremals of functional using calculus of variations and solve the problems arising in dynamics of rigid bodies and vibrational analysis.

Text Books

1. Higher Engineering Mathematics by B.S.Grewal
2. Advanced Engineering Mathematics by E. Kreszig
3. Engineering Mathematics by Srimanta Pal et al

References Books:

1. Engineering Mathematics by N.P. Bali and Manish Goyal
2. Higher Engineering Mathematics by B.V. Ramana
3. Advanced Engineering Mathematics by Chandrika Prasad and Reena Garg
4. Advanced Engineering Mathematics by C Ray Wylie,Louis C Barrett
5. Introductory methods of numerical analysis by S S Sastry

(Chetana C/Rashmi S H)
Staff in charge

(Dr. Chetana C)
HOD

PRINCIPAL
SET, TUMKUR
(Dr. Narendra Viswanath)
PRINCIPAL
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Sri Shridevi Charitable Trust (R)

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sira Road, Tumkur – 572 106. Karnataka.

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2019 - 2020 WEF: 22/08/2019

Course Instructor: Mrs.Veena N D **Class: I Sem "C"**

Course Name : C PROGRAMMING FOR PROBLEM SOLVING **Course Code: 18CPS13**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		MODULE I		
01	22/08/19	Introduction to computer Hardware and software	Covered	
02	22/08/19	Computer generations, computer ypes, bits, bytes and words.	Covered	
03	23/08/19	CPU, Primary memory, Secondary memory.	Covered	
04	26/08/19	Ports and connections, input devices, output device.	Covered	
05	27/08/19	Computers in a network, Network hardware.	Covered	
06	29/08/19	Software basics, software types.	Covered	
07	29/08/19	Overview of C: Basic structure of C program, Executing a C program.	Covered	
08	30/08/19	Constant, variable and data types	Covered	
09	03/09/19	data types	Covered	
10	05/09/19	data types	Covered	
11	05/09/19	Operators and expressions	Covered	
12	06/09/19	Operators and expressions	Covered	
13	09/09/19	Revision Module I	Covered	
		MODULE II		
14	12/09/19	Managing Input and output operations.	Covered	
15	12/09/19	Conditional Branching and Loops	Covered	
16	13/09/19	Conditional Branching and Loops	Covered	
17	16/09/19	Conditional Branching and Loops	Covered	
18	17/09/19	For loop Example programs	Covered	
19	19/09/19	While loop Example programs	Covered	
20	19/09/19	Do while loop Example programs	Covered	
21	20/09/19	Do while loop Example programs cont..	Covered	
22	23/09/19	Finding roots of a quadratic equation	Covered	
23	24/09/19	Computation of binomial coefficients	Covered	
24	30/09/19	Plotting of Pascals triangle	Covered	
25	01/10/19	Revision Module II	Covered	
		MODULE III		
26	03/10/19	Arrays (1-D, 2-D)	Covered	
27	03/10/19	Arrays (1-D, 2-D) contd..	Covered	
28	04/10/19	Character arrays	Covered	
29	10/10/19	Strings	Covered	
30	10/10/19	Basic Algorithms	Covered	
31	11/10/19	Searching andSorting Algorithms	Covered	
32	14/10/19	Linear search	Covered	
33	15/10/19	Binary search	Covered	
34	17/10/19	Bubble sort and Selection sort	Covered	
35	17/10/19	Revision Module III	Covered	

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Sira Road, Tumkur – 572 106. Karnataka.

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2019 - 2020/ **WEF: 22/08/2019**

Academic Year 2019-20 (ODD Sem)

LECTURE PLAN

***Cover Page:* Course Overview**
***Semester:* I Semester** **Year: 2018-2019**

Course Title: **C PROGRAMMING FOR PROBLEM SOLVING**	*Course Code:* **18CPS13/23**
Total contact Hours: **55**	*Duration of Exam:* **03 Hrs.**
EE Marks :**60**	CIE Marks :**40**
esson plan author: **Mrs.Veena N D**	*Date:* **21/08/2019**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **21/08/2019**

Objectives:

1. Familiarize with writing of algorithms, fundamentals of C and philosophy of problem solving.
2. Implement different programming constructs and decomposition of problems into functions.
3. Use and implement data structures like arrays and structures to obtain solutions.
4. Define and use of pointers with simple applications.

ourse Outcomes: The student will be able to :

1. Illustrate simple algorithms from the different domains such as mathematics, physics, etc.
2. Construct a programming solution to the given problem using C.
3. Identify and correct the syntax and logical errors in C programs.
4. Modularize the given problem using functions and structures.

		MODULE IV	
36	18/10/19	User Defined Functions	Covered
37	21/10/19	User Defined Functions Contd.,	Covered
38	22/10/19	User Defined Functions Example programs	Covered
39	24/10/19	Recursion.	Covered
40	24/10/19	Example programs	Covered
41	25/10/19	Finding Factorial of a positive integers	Covered
42	28/10/19	Fibonacci series.	Covered
43	31/10/19	Example programs	Covered
44	7/11/19	Example programs contd.,	Covered
45	7/11/19	Revision Module IV	Covered
		MODULE V	
46	8/11/19	Structure	Covered
47	11/11/19	Structure Contd.,	Covered
48	12/11/19	Example programs	Covered
49	14/11/19	Pointers	Covered
50	18/11/19	Pointers Contd.,	Covered
51	19/11/19	Preprocessor Directives	Covered
52	21/11/19	Example programs	Covered
53	22/11/19	Example programs	Covered
54	25/11/19	Revision V	Covered
55	26/11/19	Model Question Paper Discussion	Covered
56	28/11/19	Model Question Paper Discussion	Covered

Text Books:

1. E. Balaguruswamy, Programming in ANSI C, 7th Edition, Tata McGraw-Hil
2. Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall offIndia

Reference Books:

1. Sumitabha Das, Computer Fundamentals & C Programming, Mc Graw Hill Education.
2. Programming in C By A m Padma Reddi.
3. Vikas Gupta: Computer Concepts and C Programming, Dreamtech Press 2013.
4. R S Bichkar, Programming with C, University Press, 2012.
5. V Rajaraman: Computer Programming in C, PHI, 2013.
6. Basavaraj S. Anami, Shanmukhappa A Angadi, Sunilkumar S. Manvi, Computer Concepts and C Programming: A Holistic Approach to Learning C, Seond edition, PHI India, 2010.

[Mrs.Veena N D]
Staff In charge

[Prof. C V Shanmuka Swamy]
HOD, CSE

[Dr.Narendra Vishwanth]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

Sri Shridevi Charitable Trust (R)
SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
Sira Road, Tumkur – 572 106, Karnataka
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2019 - 2020/ WEF: 22/08/2019

Academic Year 2019-20 (ODD Sem)

LECTURE PLAN

Cover Page: **Course Overview**
Semester: **I Semester** **Year: 2019-2020**

Course Title: **C PROGRAMMING FOR PROBLEM SOLVING**	*Course Code:* **18CPS13/23**
Total contact Hours: **53** SEE Marks: **60**	*Duration of Exam:* **03 Hrs.** CIE Marks: **40**
Lesson plan author: **Mr. Kiran G M**	*Date:* **21/08/2019**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **21/08/2019**

Objectives:

Course Outcomes: The student will be able to :

1. Illustrate simple algorithms from the different domains such as mathematics, physics, etc.
2. Construct a programming solution to the given problem using C.
3. Identify and correct the syntax and logical errors in C programs.
4. Modularize the given problem using functions and structures.

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sira Road, Tumkur – 572 106, Karnataka

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2019 - 2020 WEF: 22/08/2019

Course Instructor: Mr. Kiran G M
Course Name : C PROGRAMMING FOR PROBLEM SOLVING

Class: I Sem "D"
Course Code: 18CPS13

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		MODULE I		
01	22/08/19	Introduction to computer Hardware and software	Covered	
02	22/08/19	Computer generations, computer types, bits, bytes and words	Covered	
03	23/08/19	CPU, Primary memory, Secondary memory	Covered	
04	26/08/19	Ports and connections, input devices, output devices		
05	27/08/19	Computers in a network, Network hardware	Covered	
06	29/08/19	Software basics, software types	Covered	
07	29/08/19	Overview of C Basic structure of C program, Executing a C program	Covered	
08	30/08/19	Constant, variable and data types	Covered	
09	03/09/19	data types	Covered	
10	05/09/19	data types	Covered	
11	05/09/19	Operators and expressions	Covered	
12	06/09/19	Operators and expressions	Covered	
13	09/09/19	Revision Module I	Covered	
		MODULE II		
14	12/09/19	Managing input and output operations	Covered	
15	12/09/19	Conditional Branching and Loops	Covered	
16	13/09/19	Conditional Branching and Loops	Covered	
17	16/09/19	Conditional Branching and Loops	Covered	
18	17/09/19	For loop Example programs	Covered	
19	19/09/19	While loop Example programs	Covered	
20	19/09/19	Do while loop Example programs	Covered	
21	20/09/19	Do while loop Example programs cont..	Covered	
22	23/09/19	Finding roots of a quadratic equation	Covered	
23	24/09/19	Computation of binomial coefficients	Covered	
24	30/09/19	Printing of Pascals triangle	Covered	
25	01/10/19	Revision Module II	Covered	
		MODULE III		
26	03/10/19	Array-(1-D, 2-D)	Covered	
27	03/10/19	Array-(1-D, 2-D) cont..	Covered	
28	04/10/19	Character arrays	Covered	
29	10/10/19	Strings	Covered	
30	10/10/19	Basic Algorithms	Covered	
31	11/10/19	Searching and Sorting Algorithms	Covered	
32	14/10/19	Linear search	Covered	
33	15/10/19	Binary search	Covered	
34	17/10/19	Bubble sort and Selection sort	Covered	
35	17/10/19	Revision Module III	Covered	

		MODULE IV	
36	18/10/19	User Defined Functions	Covered
37	21/10/19	User Defined Functions Contd..	Covered
38	22/10/19	User Defined Functions. Example programs	
39	24/10/19	Recursion	Covered
40	24/10/19	Example programs	Covered
41	25/10/19	Finding Factorial of a positive integers	Covered
42	28/10/19	Fibonacci series.	
43	31/10/19	Example programs	Covered
44	7/11/19	Example programs contd.	Covered.
45	7/11/19	Revision Module IV	
		MODULE V	
46	8/11/19	Structure	Covered
47	11/11/19	Structure Contd..	Covered
48	12/11/19	Example programs	Covered
49	14/11/19	Pointers	Covered
50	18/11/19	Pointers Contd..	Covered
51	19/11/19	Preprocessor Directives	Covered
52	21/11/19	Example programs	Covered
53	22/11/19	Example programs	Covered
54	25/11/19	Revision V	Covered
55	26/11/19	Model Question Paper Discussion	Covered
56	28/11/19	Model Question Paper Discussion	Covered.

Text Books:

1. E. Balaguruswamy, Programming in ANSI C, 7th Edition, Tata McGraw-Hill
2. Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall of India

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4. R S Bichkar: Programming with C, University Press, 2012.
5. V Rajaraman: Computer Programming in C, PHI, 2013.
6. Basavaraj S. Anami, Shanmukhappa A Angadi, Sunilkumar S. Manvi, Computer Concepts and C Programming: A Holistic Approach to Learning C, Second edition, PHI India, 2010.

[Mr. Kiran G M]
Staff in charge

[Prof. C. V Shanmukha Swamy]
HOD, CSE

[Dr Narendra Vishwanth]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Sri Shridevi Charitable Trust (R)

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sira Road, Tumkur – 572 106, Karnataka.

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2018 - 2019/

WEF: 25/02/2019

Course Instructor: Ms. Mala K **Class: II Sem**

Course Name : : C PROGRAMMING FOR PROBLEM SOLVING **Course Code: 18CPS13/23**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	25-02-2019	Introduction to computer Hardware and software	Covered	
02	26-02-2019	Computer generations, computer ypes, bits, bytes and words.	Covered	
03	28-02-2019	CPU, Primary memory, Secondary memory.	Covered	
04	28-02-2019	Ports and connections,	Covered	
05	01-03-2019	Input devices, output device	Covered	
06	05-03-2019	Computers in a network, Network hardware.	Covered	
07	07-03-2019	Software basics, software types.	Covered	
08	07-03-2019	Overview of C: Basic structure of C program.	Covered	
09	08-03-2019	Executing a C program.	Covered	
10	11-03-2019	Constant, variable and data types	Covered	
11	12-03-2019	Operators and expressions-Arithmetic & relational operators	Covered	
12	14-03-2019	Logical & Bitwise operators	Covered	
13	14-03-2019	Operators Precendence table	Covered	
14	15-03-2019	Conversion of regular Expressions to C expressions	Covered	
15	18-03-2019	Simple C programs on bitwise operators	Covered	
16	19-03-2019	Special operators – size of, &,* etc,	Covered	
17	21-03-2019	Incrementing and decrementing operators	Covered	
18	21-03-2019	Simple C programs on ++ ,-- operators	Covered	
19	22-03-2019	Algorithms	Covered	
20	25-03-2019	Flowcharts	Covered	
21	26-03-2019	Managing Input and output operations.	Covered	
22	28-03-2019	Conditional Branching and Loops	Covered	
23	28-03-2019	Simple If statement,if ..Else,	Covered	
24	01-04-2019	Nested if ..else, else ..if Ladder	Covered	
25	02-04-2019	Example program with if statements	Covered	
26	04-04-2019	Loops	Covered	
27	04-04-2019	For loop Example programs	Covered	
28	05-04-2019	For loop example Programs	Covered	
29	08-04-2019	While loop Example programs	Covered	
30	09-04-2019	Do while loop Example programs	Covered	
31	11-04-2019	Finding roots of a quadratic equation	Covered	
32	11-04-2019	Computation of binomial coefficients,	Covered	
33	12-04-2019	Plotting of Pascals triangle	Covered	
34	15-04-2019	Revision Module II	Covered	
35	23-04-2019	Arrays (1-D, 2-D)	Covered	
36	23-04-2019	Example program on 1-D arrays	Covered	

37	25-04-2019	Arrays (1-D, 2-D) contd.,	Covered	
38	25-04-2019	Example program on 2-D arrays	Covered	
39	26-04-2019	Character arrays and Strings	Covered	
40	29-04-2019	Program on character arrays, string functions	Covered	
41	30-04-2019	Basic Algorithms	Covered	
42	02-05-2019	Searching -Linear search	Covered	
43	02-05-2019	Binary search,	Covered	
44	03-05-2019	Sorting Algorithms Bubble sort Selection sort	Covered	
45	06-05-2019	Program to generate Fibonacci numbers	Covered	
46	09-05-2019	Program to find sum of two matrices	Covered	
47	09-05-2019	Program to multiply two matrices	Covered	
48	10-05-2019	Program to check a matrix is symmetric or not,transpose	Covered	
49	13-05-2019	Revision Module III	Covered	
50	14-05-2019	User Defined Functions	Covered	
51	20-05-2019	User Defined Functions Contd.,	Covered	
52	21-05-2019	Types of functions	Covered	
53	23-05-2019	Functions with parameters No return values	Covered	
54	23-05-2019	Functions with parameters with return values	Covered	
55	24-05-2019	Functions with No parameters No return values Functions with No parameters with return values	Covered	
56	27-05-2019	Recursion	Covered	
57	28-05-2019	Example programs	Covered	
58	30-05-2019	Finding Factorial of a positive integers	Covered	
59	30-05-2019	Fibonacci series.	Covered	
60	31-05-2019	Structure	Covered	
61	03-06-2019	Structure Contd.,	Covered	
62	04-06-2019	Program on student structure and employee structure	Covered	
63	06-06-2019	Example programs	Covered	
64	06-06-2019	Pointers	Covered	
65	07-06-2019	Pointers Contd.,	Covered	
66	13-06-2019	Pointers Contd.,	Covered	
67	13-06-2019	Preprocessor Directives	Covered	
68	14-06-2019	Example programs	Covered	
69	17-06-2019	Model Question Paper Discussion	Covered	

Text Books:

1. E. Balaguruswamy, Programming in ANSI C, 7th Edition, Tata McGraw-Hill
2. Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall ofIndia

Reference Books:

1. Sumitabha Das, Computer Fundamentals & C Programming, Mc Graw Hill Education.
2. Gary J Bronson, ANSI C Programming, 4th Edition, Cenage Learning.
3. Vikas Gupta: Computer Concepts and C Programming, Dreamtech Press 2013.
4. R S Bichkar, Programming with C, University Press, 2012.
5. V Rajaraman: Computer Programming in C, PHI, 2013.
6. Basavaraj S. Anami, Shanmukhappa A Angadi, Sunilkumar S. Manvi, Computer Concepts and C Programming: A Holistic Approach to Learning C, Second edition, PHI India, 2010.

[Mr.Mala K]
Staff In charge

[Prof. C V Shalini Swamy]
HOD, CSE

[Dr.Hemadri Naidu T]
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Sri Shridevi Charitable Trust (R)
SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOG
Sira Road, Tumkur – 572 106. Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.
Academic Year 2018-19 (ODD Sem)

SIET / CSE / 2018 - 2019/ W.E.F: 25/02/2019

COURSE PLAN

Cover Page: **Course Overview**
Semester: II Semester **Year: 2018-2019**

Course Title: **C PROGRAMMING FOR PROBLEM SOLVING**	*Course Code:* **18CPS13/23**
Total contact Hours:69	*Duration of Exam:* **03 Hrs.**
SEE Marks : **60 (100 reduced to 60)**	CIE Marks :**40**
Lesson plan author: **Ms. Mala K**	*Date:* **23/02/2019**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **23/02/2019**

Course Learning Objectives:

This course (18CPS13/23) will enable students to :

1. Familiarize with writing algorithms ,fundamentals oc and philosophy of problem solving
2. Implement different programming constructs and decomposition of problems into functions.
3. Become familiar with the basic concepts of procedure-oriented programming
4. Use and Implement data structures like arrays and structures to obtain solutions.
5. Get a solid understanding of C functions .
6. Define and use of pointers with simple applications.

Course Outcomes:

The student will be able to :

1. Illustrate simple algorithms from the different domains such as mathematics, physics, etc.
2. Construct a programming solution to the given problem using C.
3. Identify and correct the syntax and logical errors in C programs.
4. Modularize the given problem using functions and structures.

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
(Recognized by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)
Sira Road, Tumakuru - 572 106. Karnataka.
Phone: 0816-2212520 | Fax: 0816-2212528 | Email: info@shridevieng.org | Web: http://www.shridevieng.org

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Academic Year 2018-19 (Even Sem)

COURSE PLAN

Cover Page: **Course Overview**
Semester: VIII Semester **Year: 2018-19**

Course Title: **SYSTEM MODELLING AND SIMULATION**	*Course Code:* **15CS834**
Total contact Hours: **53**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Ms. Swetha K.H**	*Date:* **01/ 02/ 2019**
Checked by: **Prof. C V Shanmukaswamy**	*Date:* **01/ 02/ 2019**

Objectives:

This course will enable students to:

- Explain the basic system concept and definitions of system.
- Discuss techniques to model and to simulate various systems.
- Analyze a system and to make use of the information to improve the performance.

Outcomes:

After studying this course, student should be able to:

- Explain the system concept and apply functional modeling method to model the activities of a static system.
- Describe the behavior of a dynamic system and create an analogous model for a dynamic system.
- Simulate the operation of a dynamic system and make improvement according to the simulation results.

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(Recognized by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)
Sira Road, Tumakuru - 572 106. Karnataka.
Phone: 0816-2015699 | Fax: 0816-2015688 | Email: info@shridevienggcollege.org | Web: http://www.shridevienggcollege.org

Academic Year 2018-19 (Even Sem)

COURSE PLAN

Staff: Ms. Swetha K.H **Class: VIII Sem**

Course: SYSTEM MODELLING AND SIMULATION **Sub. Code: 15CS834**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	01/02/19	**MODULE-1: 10 Hours** **Introduction:** When simulation is the appropriate tool and when it is not appropriate,	Covered	
02	02/02/19	Advantages and disadvantages of Simulation; Areas of application,	Covered	
03	06/02/19	Systems and system environment; Components of a system;	Covered	
04	07/02/19	Discrete and continuous systems, Model of a system;	Covered	
05	08/02/19	Types of Models, Discrete-Event System	Covered	
06	09/02/19	Simulation Simulation examples: Simulation of queuing systems.	Covered	
07	13/02/19	Simulation of queuing systems continued.	Covered	
08	14/02/19	**General Principles, Simulation Software:**Concepts in Discrete-Event Simulation.	Covered	
09	15/02/19	The Event-Scheduling / Time-Advance Algorithm,	Covered	
10	16/02/19	Manual simulation Using Event Scheduling	Covered	
11	20/02/19	Manual simulation Using Event Scheduling continued	Covered	
12	21/02/19	**MODULE – 2 10 Hours** **Statistical Models in Simulation** :Review of terminology and concepts,	Covered	
13	22/02/19	Useful statistical models,	Covered	
14	23/02/19	Discrete distributions. Continuous distributions,	Covered	
15	27/02/19	Poisson process, Empirical distributions.	Covered	
16	28/02/19	**Queuing Models:**Characteristics of queuing systems, Queuing notation,	Covered	
17	01/03/19	Long-run measures of performance of queuing systems,	Covered	
18	03/03/19	Long-run measures of performance of queuing systems,	Covered	
19	06/03/19	Steady-state behavior of M /G/1 queue,	Covered	
20	07/03/19	Steady-state behavior of M /G/1 queue continued	Covered	
21	08/03/19	Networks of queues,	Covered	
22	09/03/19	**MODULE – 3 10 Hours** **Random-Number Generation:**Properties of random numbers;	Covered	
23	13/03/19	Generation of pseudo-random numbers,	Covered	
24	20/03/19	Techniques for generating random numbers,	Covered	
25	21/03/19	Techniques for generating random numbers continued	Covered	
26	22/03/19	Tests for Random Numbers,	Covered	
27	22/03/19	Tests for Random Numbers continued.	Covered	Extra Class
28	23/03/19	Tests for Random Numbers continued.	Covered	
29	27/03/19	**Random-Variate Generation:** Inverse transform	Covered	

		technique	Covered	
30	28/03/19	Acceptance-Rejection technique.	Covered	
31	03/04/19	Acceptance-Rejection technique continued.	Covered	
32	04/04/19	**Module – 4 10 Hours** **Input Modeling:** Data Collection; Identifying the distribution with data,	Covered	
33	05/04/19	Parameter estimation,	Covered	
34	10/04/19	Goodness of Fit Tests,	Covered	
35	11/04/19	Goodness of Fit Tests continued.	Covered	
36	12/04/19	Fitting a non-stationary Poisson process,	Covered	
37	12/04/19	Selecting input models without data,	Covered	Extra Class
38	13/04/19	Multivariate and Time-Series input models.	Covered	
39	24/04/19	**Estimation of Absolute Performance:** Types of simulations with respect to output analysis ;	Covered	
40	25/04/19	Stochastic nature of output data,	Covered	
41	26/04/19	Measures of performance and their estimation.	Covered	
42	27/04/19	**MODULE – 5 10 Hours** Measures of performance and their estimation,	Covered	
43	02/05/19	Output analysis for terminating Simulations.	Covered	
44	03/05/19	Output analysis for steady-state simulations.	Covered	
45	04/05/19	**Verification, Calibration And Validation:** Optimization: Model building,	Covered	
46	08/05/19	verification and validation,	Covered	
47	09/05/19	Verification of simulation models,	Covered	
48	10/05/19	Verification of simulation models continued.	Covered	
49	10/05/19	Verification of simulation models,	Covered	Extra Class
50	11/05/19	Calibration and validation of models,	Covered	
51	15/05/19	Optimization via Simulation.	Covered	
52	22/05/19	Revision	Covered	
53	23/05/19	Previous year question papers discussion	Covered	

Text Books:

1. Jerry Banks, John S. Carson II, Barry L. Nelson, David M. Nicol: Discrete-Event System Simulation, 5 th Edition, Pearson Education, 2010.

Reference Books:

1. Lawrence M. Leemis, Stephen K. Park: Discrete – Event Simulation: A First Course, Pearson Education, 2006.
2. Averill M. Law: Simulation Modeling and Analysis, 4 th Edition, Tata McGraw-Hill, 2007

[Ms. Swetha K.H]
Staff In charge

[Prof C V Shanmukaswamy]
HOD, CSE

[Dr. T Hemadri Naidu]
Principal

PRINCIPAL
SHREEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Shridevi Institute of Engineering and Technology, Tumkur
(An ISO 9001-2008 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester: **VI Semester** **Year: 2018-2019**

CourseTitle: SYSTEM SOFTWARE & COMPILER DESIGN	*Subject Code:* **15CS63**
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Course plan author: Mr. Raghu Nandan R	*Date:* 31/01/2019
Checked by: Prof.C.V.shanmukaswamy	*Date:* 31/01/2019

PREREQUISITES: Knowledge of DFA, NFA and the system software compiler.

OBJECTIVES
The study of this course will teach the student to

- Learn how a compiler works and know about the powerful compiler generation tools, which are useful to the other non-compiler applications.
- Learn how to write programs that execute faster using parse trees.
- Describe the design of a compiler including its phases and components and acquire information about scanner, parser, code generator, and optimizer.
- Identify the similarities and differences among various parsing techniques and grammar transformation techniques.
- Describe the role of the compiler in ensuring the security, privacy and integrity of data.

OUTCOMES
Upon completion of this course will student will be

- Able to explain how a compiler works and know about the powerful compiler generation tools, which are useful to the other non-compiler applications.
- Able to explain how to write programs that execute faster using parse trees.
- Able to describe the design of a compiler including its phases and components and acquire information about scanner, parser, code generator, and optimizer.
- Able to identify the similarities and differences among various parsing techniques and grammar transformation techniques.
- Able to describe the role of the compiler in ensuring the security, privacy and integrity of data.

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		MODULE-1		
01	01/02/19	Introduction to System Software,		
02	04/02/19	Machine Architecture of SIC and SIC/XE,		
03	05/02/19	**Assemblers:** Basic assembler functions,		
04	07/02/19	machine dependent assembler features,		
05	08/02/19	machine independent assembler features,		
06	11/02/19	assembler design options.		
07	12/02/19	**Macroprocessors:** Basic macro processor functions,		
08	14/02/19	machine independent macro processor features,		
09	15/02/19	Macro processor design options,		
10	18/02/19	implementation examples		
		MODULE-2		
11	19/02/19	**Loaders and Linkers:** Basic Loader Functions,		
12	21/02/19	Machine Dependent Loader Features,		
13	22/02/19	Machine Independent Loader Features,		
14	25/02/19	Loader Design Options, Implementation Examples		
15	26/02/19	**System File and Library Structure:** Introduction,		
16	28/02/19	Library And File Organization,		
17	01/03/19	Design Of A Record Source Program File Structure,		
18	05/03/19	Object Code, Object File, Object File Structure,		
19	07/03/19	Executable File, Executable File Structure,		
20	08/03/19	Libraries, Image File Structure.		
		MODULE-3		
21	11/03/19	**Lexical Analysis**: Introduction,		
22	12/03/19	Alphabets and Tokens In Computer Languages,		
23	18/03/19	Representation of token,		
24	19/03/19	The evolution of programming languages;		
25	21/03/19	The science of building a compiler;		
26	25/03/19	Applications of Compiler technology		
27	26/03/19	Programming language basics; Lexical analysis		
28	28/03/19	Token Recognition and Finite Automata,		
29	01/04/19	Token Recognition and Finite Automata contd.,		
30	02/04/19	Implementation, Error Recovery.		
		MODULE-4		
31	04/04/19	Introduction to syntax analysis,		
32	05/04/19	Role Of Parsers,		
33	08/04/19	Context Free Grammars,		
34	09/04/19	Context Free Grammars contd....		
35	11/04/19	Top Down Parsers,		
36	12/04/19	Top-down Parsing, descent parsing, FIRST and FOLLOW		
37	15/04/19	Non recursive descent parsing, error recovery in predictive parsing		

38	22/04/19	Bottom-Up Parsers.	Covered	
39	23/04/19	Bottom-Up Parsers, contd.....	Covered	
40	25/04/19	Operator-Precedence Parsing	Covered	
		MODULE-5		
41	26/04/19	Syntax-directed translation: syntax-directed definitions	Covered	
42	29/04/19	Evaluation order for SDDs-Dependency graphs,	Covered	
43	30/04/19	S-Attributed definition,L-Attributed definition, semantic rules with controlled side effects	Covered	
44	02/05/19	Applications of Syntax-directed translation	Covered	
45	03/05/19	Types & declarations-type expressions, type equivalence, declarations,	Covered	
46	06/05/19	storage layout for local ,sequences of declaration,	Covered	
47	09/05/19	names, fields in records and classes Translation of expressions, Type checking, Control flow, Back patching	Covered	
48	10/05/19	Switch statements; Intermediate code for procedures.	Covered	
49	13/05/19	CODE GENERATION: Issues in the design of Code Generator, The Target language: Addresses in the target code	Covered	
50	14/05/19	Basic blocks and Flow graphs, Optimization of basic blocks.	Covered	
51	20/05/19	Question paper discussion	Covered	
52	21/05/19	Question paper discussion	Covered	

TEXT BOOK:

1. **Compilers- Principles, Techniques and Tools** – Alfred V Aho, Monica S. Lam, Ravi Sethi, Jeffrey D Ullman – 2nd Edition, Addison-Wesley, 2007.

REFERENCE BOOKS:

1. **Crafting a Compiler with C** – Charles N. Fischer, Richard J. leBlanc, Jr., Pearson Education, 1991.
2. **Modern Compiler Implementation in C** – Andrew W Appel Cambridge University Press, 1997.
3. **Compiler Construction Principles & Practice** – Kenneth C Louden – Thomson Education, 1997.

31/10/19

[Mr.Raghu Nandan R]
Staff Incharge

21/10/19

[Prof.C.V.Shanmukaswamy]
Head, Dept of CSE

31-1-19

[Dr. T. Hemadri Naidu]
Principal

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TUMKUR - 572106

COURSE PLAN

Semester: VIII **Year: 2018-2019**

Subject Title: Big Data Analytics	Course Code: 15CS82
Total contact Hours: 55	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 20
Course plan author: Mr Renukaradhya P C	Date: 31/01/2019
Checked by: Prof. C V Shanmuka Swamy	Date: 31/01/2019

OBJECTIVES

- Understand Hadoop Distributed File system and examine MapReduce Programming
- Explore Hadoop tools and manage Hadoop with Ambari
- Appraise the role of Business intelligence and its applications across industries
- Assess core data mining techniques for data analytics
- Identify various Text Mining techniques

OUTCOMES

- Master the concepts of HDFS and MapReduce framework
- Investigate Hadoop related tools for Big Data Analytics and perform basic Hadoop Administration
- Recognize the role of Business Intelligence, Data warehousing and Visualization in decision making
- Infer the importance of core data mining techniques for data analytics
- Compare and contrast different Text Mining Techniques

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Sl. No	DATES	TOPIC NAMES	TOPICS COVERED	REMARKS
1	01-02-2019	**Module – 1** Hadoop Distributed File System Basics	covered	
2	02-02-2019	Hadoop Distributed File System Basics	covered	
3	06-02-2019	Hadoop Distributed File System Basics	covered	
4	07-02-2019	Running Example Programs	covered	
5	08-02-2019	Running Example Programs	covered	
6	09-02-2019	Benchmarks	covered	
7	13-02-2019	Hadoop MapReduce Framework	covered	
8	14-02-2019	Hadoop MapReduce Framework	covered	
9	15-02-2019	Hadoop MapReduce Framework	covered	
10	16-02-2019	MapReduce Programming	covered	
11	20-02-2019	MapReduce Programming	covered	
12	21-02-2019	MapReduce Programming	covered	
13	22-02-2019	**Module – 2** Essential Hadoop Tools	covered	
14	23-02-2019	Essential Hadoop Tools	covered	
15	27-02-2019	Hadoop YARN Applications	covered	
16	28-02-2019	Hadoop YARN Applications	covered	
17	01-03-2019	Managing Hadoop with Apache Ambari	covered	
18	02-03-2019	Managing Hadoop with Apache Ambari	covered	
19	06-03-2019	Basic Hadoop Administration Procedures	covered	
20	07-03-2019	Basic Hadoop Administration Procedures	covered	
21	08-03-2019	Basic Hadoop Administration Procedures	covered	
22	09-03-2019	Basic Hadoop Administration Procedures	covered	
23	13-03-2019	Basic Hadoop Administration Procedures	covered	
24	13-03-2019	**Module – 3** Business Intelligence Concepts and Application	covered	
25	20-03-2019	Business Intelligence Concepts and Application	covered	
26	2103-2019	Business Intelligence Concepts and Application	covered	
27	22-03-2019	Business Intelligence Concepts and Application.	covered	
28	23-03-2019	Data Warehousing	covered	
29	27-03-2019	Data Warehousing	covered	
30	28-03-2019	Data Warehousing.	covered	

31	28-03-2019	Data Mining, Data Visualization		
32	28-03-2019	Data Mining, Data Visualization		
33	28-03-2019	Data Mining, Data Visualization		
34	28-03-2019	Data Mining, Data Visualization		
35	28-03-2019	Data Mining, Data Visualization		
36	28-03-2019	**Module – 4** Decision Trees, Regression,		
37	03-04-2019	Decision Trees, Regression,		
38	04-04-2019	Decision Trees, Regression,		
39	05-04-2019	Artificial Neural Networks		
40	10-04-2019	Artificial Neural Networks		
41	11-04-2019	Artificial Neural Networks		
42	12-04-2019	Cluster Analysis,		
43	13-04-2019	Cluster Analysis,		
44	24-04-2019	Association Rule Mining		
45	25-04-2019	Association Rule Mining		
46	26-04-2019	Association Rule Mining		
47	27-04-2019	Association Rule Mining		
48	02-05-2019	**Module – 5** Text Mining, Naïve-Bayes Analysis,		
49	03-05-2019	Text Mining, Naïve-Bayes Analysis,		
50	04-05-2019	Text Mining, Naïve-Bayes Analysis,		
51	08-05-2019	Support Vector Machines		
52	09-05-2019	Support Vector Machines		
53	10-05-2019	Support Vector Machines		
54	11-05-2019	Web Mining, Social Network Analysis		
55	15-05-2019	Web Mining, Social Network Analysis		
56	22-05-2019	Web Mining, Social Network Analysis		
57	23-05-2019	Web Mining, Social Network Analysis		

Text Books:

1. Douglas Eadline, **"Hadoop 2 Quick-Start Guide: Learn the Essentials of Big Data Computing in the Apache Hadoop 2 Ecosystem"**, 1st Edition, Pearson Education, 2016. ISBN-13: 978-9332570351

2. Anil Maheshwari, **"Data Analytics"**, 1st Edition, McGraw Hill Education, 2017. ISBN-13: 978-9352604180

Reference Books:

1) Tom White, **"Hadoop: The Definitive Guide"**, 4 Edition, O'Reilly Media,

2) Boris Lublinsky, Kevin T.Smith, Alexey Yakubovich,**"Professional Hadoop Solutions"**, 1st Edition, Wrox Press, 2014ISBN-13: 978-8126551071

3) Eric Sammer,**"Hadoop Operations: A Guide for Developers and dministrators"**,1st Edition, O'Reilly Media, 2012.ISBN-13: 978-9350239261

Mr. Ramakaradhya P C
Staff-Incharge

Prof. C V Shanmukh Swamy
Head, Dept of CSE

Dr T Hemadri Naidu
Principal

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		Environment		
		MODULE-5		
41	02/05/19	IoT Physical Devices and Endpoints - Arduino UNO: Introduction to Arduino, Arduino UNO,		
42	08/05/19	Installing the Software, Fundamentals of Arduino Programming,		
43	09/05/19	IoT Physical Devices and Endpoints - RaspberryPi: Introduction to RaspberryPi,		
44	10/05/19	About the RaspberryPi Board: Hardware Layout,		
45	11/05/19	Operating Systems on RaspberryPi, Configuring RaspberryPi,		
46	15/05/19	Programming RaspberryPi with Python,		
47	22/05/19	Wireless Temperature Monitoring System Using Pi, DS18B20 Temperature Sensor,		
48	22/05/19	Connecting Raspberry Pi via SSH, Accessing Temperature from DS18B20 sensors,		Extra class
49	22/05/19	Remote access to RaspberryPi, Smart and Connected Cities,		Extra class
50	23/05/19	An IoT Strategy for Smarter Cities, Smart City IoT Architecture,		
51	23/05/19	Smart City Security Architecture, Smart City Use-Case Examples.		Extra class
52	23/05/19	Question paper discussion		Extra class

TEXT BOOK:

1. David Hanes, Gonzalo Salgueiro, Patrick Grossetete, Robert Barton, Jerome Henry,"IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things", 1st Edition, Pearson Education (Cisco Press Indian Reprint). (ISBN: 978-9386873743)

2. Srinivasa K G, "Internet of Things", CENGAGE Leaning India, 2017

REFERENCE BOOKS:

1. Vijay Madisetti and Arshdeep Bahga, "Internet of Things (A Hands -on- Approach)", 1st Edition, VPT, 2014. (ISBN: 978-8173719547)

2. Raj Kamal, "Internet of Things: Architecture and Design Princi ples", 1st Edition, McGraw Hill Education, 2017. (ISBN: 978-9352605224).

[Ms. Shilpa. R]
Staff Incharge

[Prof C.V Shanthakaswamy]
Head, Dept of CSE

[Dr. T. Hemadri Naidu]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR-572106
ACADEMIC YEAR 2017-18 (EVEN SEM)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LECTURE PLAN

Staff: Renukaradhya P C | **Sub: Computer Graphics laboratory with mini project**
Sem: VI Sem, ' A1 ' Batch (Tue) | **Sub Code: 15CSL68**

SL NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
1	5/2/2019	**PART – A:** Introduction basic concepts	covered	
2	12/2/2019	1. Implement Brenham's line drawing algorithm for all types of slope.	covered	
3	19/2/2019	2. Create and rotate a triangle about the origin and a fixed point.	covered	
4	26/2/2019	3. Draw a color cube and spin it using OpenGL transformation matrices.	covered	
5	5/3/2019	4. Draw a color cube and allow the user to move the camera suitably to experiment with perspective viewing.	covered	
6	5/3/2019	5. Clip a lines using Cohen-Sutherland algorithm	covered	**Extra Lab**
7	12/3/2019	**Internals-I** 6. To draw a simple shaded scene consisting of a tea pot on a table. Define suitably the position and properties of the light source along with the properties of the surfaces of the solid object used in the scene.	covered	
8	19/3/2019	7. Design, develop and implement recursively subdivide a tetrahedron to form 3D sierpinski gasket. The number of recursive steps is to be specified by the user.	covered	
9	26/3/2019	8. Develop a menu driven program to animate a flag using Bezier Curve algorithm	covered	
10	2/4/2019	9. Develop a menu driven program to fill the polygon using scan line algorithm	covered	
11	9/4/2019	**Internals-II** **PART – B:**Develop a suitable Graphics package to implement the skills learnt in the theory and the exercises indicated in Part A. Use the OpenGL.	covered	
12	23/4/2019	Project work	covered	
13	30/4/2019	Project work continued.	covered	
14	14/5/2019	Project work continued.	covered	
15	21/5/2019	**Internals-III**	covered	

[Mr. Renukaradhya P C]
Staff Incharge

[Prof. C.V Shanmuka Swamy]
HOD, CSE

COURSE PLAN

***Cover Page:* Course Overview**
***Semester:* VIII Semester** **Year: 2018-2019**

Course Title: INTERNET OF THINGS TECHNOLOGY	*Subject Code:* **15CS81**
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Course plan author: Ms. Shilpa. R	*Date:* 31/01/2019
Checked by: Prof.C.V.shanmukaswamy	*Date:* 31/01/2019

PREREQUISITES: Wireless Sensor networks, Mobile Networks.

OBJECTIVES
The study of this course will teach the student to

- Assess the genesis and impact of IoT applications, architectures in real world.
- Illustrate diverse methods of deploying smart objects and connect them to network.
- Compare different Application protocols for IoT.
- Infer the role of Data Analytics and Security in IoT.
- Identify sensor technologies for sensing real world entities and understand the role of IoT in various domains of Industry.

OUTCOMES
Upon completion of this course will student will be

- Interpret the impact and challenges posed by IoT networks leading to new architectural models.
- Compare and contrast the deployment of smart objects and the technologies to connect them to network.
- Appraise the role of IoT protocols for efficient network communication.
- Elaborate the need for Data Analytics and Security in IoT.
- Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry.

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		MODULE-1		
01	01/02/19	What is IoT,	covered	
02	02/02/19	Genesis of IoT, IoT and Digitization,	covered	
03	06/02/19	IoT Impact, Convergence of IT and IoT,	covered	
04	07/02/19	IoT Challenges, IoT Network Architecture and Design,	covered	
05	08/02/19	Drivers Behind New Network Architectures,	covered	
06	09/02/19	Comparing IoT Architectures,	covered	
07	13/02/19	A Simplified IoT Architecture,	covered	
08	14/02/19	The Core IoT Functional Stack,	covered	
09	15/02/19	IoT Data Management and Compute Stack	covered	
10	16/02/19	What is IoT,	covered	
		MODULE-2		
11	20/02/19	Smart Objects: The "Things" in IoT,	covered	
12	21/02/19	Sensors,	covered	
13	22/02/19	Actuators,	covered	
14	23/02/19	Smart Objects,	covered	
15	27/02/19	Sensor Networks,	covered	
16	28/02/19	Connecting Smart Objects,	covered	
17	01/03/19	Connecting Smart Objects contd…	covered	
18	02/03/19	Communications Criteria,	covered	
19	06/03/19	IoT Access Technologies	covered	
20	07/03/19	IoT Access Technologies contd…	covered	
		MODULE-3		
21	08/03/19	IP as the IoT Network Layer,	covered	
22	09/03/19	The Business Case for IP,	covered	
23	13/03/19	The Business Case for IP contd…	covered	
24	19/03/19	The need for optimization,	covered	
25	20/03/19	Optimizing IP for IoT,	covered	
26	21/03/19	Profiles and Compliances,	covered	
27	27/03/19	Application Protocols for IoT,	covered	
28	28/03/19	The Transport Layer,	covered	
29	03/04/19	IoT Application Transport Methods,	covered	
30	04/04/19	IoT Application Transport Methods contd…	covered	
		MODULE-4		
31	05/04/19	Data and Analytics for IoT, An Introduction to Data Analytics for IoT,	covered	
32	10/04/19	Machine Learning,	covered	
33	11/04/19	Big Data Analytics Tools and Technology,	covered	
34	12/04/19	Edge Streaming Analytics,	covered	
35	13/04/19	Network Analytics,	covered	
36	24/04/19	Securing IoT, A Brief History of OT Security,	covered	
37	25/04/19	Common Challenges in OT Security,	covered	
38	26/04/19	How IT and OT Security Practices and Systems Vary,	covered	
39	27/04/19	Formal Risk Analysis Structures: OCTAVE and FAIR,	covered	
40	01/05/19	The Phased Application of Security in an Operational	covered	

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COURSE PLAN

***Cover Page*: Subject Overview**
Semester: VI Semester **Year:2018-19**

Subject Title: **OPERATIONS RESEARCH**	*Subject Code:* 15CS653
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Suthan R	*Date:30/01/2019*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 01/02/2019

***Prerequisites*:** Familiarity with Linear programming Model, knowledge of Operation research

Objectives:

Up on completion of this course the student will:

- Continue to introduce the methods of Operations Research
- Emphasize the mathematical procedures of nonlinear programming search techniques
- Introduce advanced topics such as probabilistic models (Markov chain & queuing theory) and dynamic programming
- Relate the course material to research activities (graduate students)

Outcomes:

The student should be:

- Able to manage risk.
- Able to deduce the cost of transportation.
- Able to resolve various methods to maximize the profit in industry.
- Able to understand mathematical procedures.
- Able to understand theory of games.

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DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2018-19 (Even Sem)

COURSE PLAN

Staff : Mr.Suthan R
Subject : OPERATIONS RESEARCH

Class :VI
Sub.Code : 15CS653

SL No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
1	01/02/19	**Module – 1: Introduction, Linear Programming:** Introduction: The origin, nature and impact of OR;	COVERED	
2	05/02/19	Defining the problem and gathering data;	COVERED	
3	06/02/19	Formulating a mathematical model; Deriving solutions from the model;	COVERED	
4	07/02/19	Testing the model; Preparing to apply the model; Implementation .	COVERED	
5	08/02/19	**Introduction to Linear Programming Problem (LPP):** Prototype example, Assumptions of LPP.	COVERED	
6	12/02/19	Formulation of LPP various examples	COVERED	
7	13/02/19	Formulation of LPP various examples	COVERED	
8	14/02/19	Formulation of LPP various examples	COVERED	
9	15/02/19	Graphical method various examples.	COVERED	
10	19/02/19	Graphical method various examples.	COVERED	
11	20/02/19	**Module – 2: Simplex Method – 1:** The essence of the simplex method;	COVERED	
12	21/02/19	Setting up the simplex method; Types of variables,	COVERED	
13	22/02/19	Setting up the simplex method; Types of variables,	COVERED	
14	26/02/19	Algebra of the simplex method; the simplex method in tabular form;	COVERED	
15	27/02/19	Algebra of the simplex method; the simplex method in tabular form;	COVERED	
16	28/02/19	Tie breaking in the simplex method	COVERED	
17	01/03/19	Tie breaking in the simplex method	COVERED	
18	05/03/19	Big M method	COVERED	
19	06/03/19	Big M method	COVERED	
20	07/03/19	Two phase method.	COVERED	
			COVERED	
21	08/03/19	**Module – 3: Duality Theory** - The essence of duality theory	COVERED	
22	12/03/19	Primal dual relationship,	COVERED	
23	19/03/19	Primal dual relationship,	COVERED	
24	20/03/19	Primal dual relationship,	COVERED	
25	21/03/19	conversion of primal to dual problem and vice versa	COVERED	
26	22/03/19	conversion of primal to dual problem and vice versa	COVERED	
27	26/03/19	conversion of primal to dual problem and vice versa	COVERED	
28	27/03/19	The dual simplex method.	COVERED	
29	28/03/19	The dual simplex method.	COVERED	
30	02/04/19	The dual simplex method.	COVERED	

	03/04/19	transportation problem,iterations:		
32	04/04/19	Initial Basic Feasible Solution (IBFS) by North West Corner Rule method		
33	05/04/19	Matrix Minima Method, Vogel's Approximation Method.		
34	09/04/19	Optimal solution by Modified Distribution Method (MODI).		
35	10/04/19	Optimal solution by Modified Distribution Method (MODI).		
36	11/04/19	The Assignment problem		
37	12/04/19	A Hungarian algorithm for the assignment problem.		
38	23/04/19	A Hungarian algorithm for the assignment problem.		
39	24/04/19	Minimization and Maximization varieties in transportation and assignment problems		
40	25/04/19	Minimization and Maximization varieties in transportation and assignment problems		
41	26/04/19	**Module – 5: Game Theory:** Game Theory: The formulation of two persons		
42	30/04/19	zero sum games; saddle point, maximin and minimax principle.		
43	01/05/19	Solving simple games- a prototype example;		
44	02/05/19	Games with mixed strategies; Graphical solution procedur		
45	03/05/19	Games with mixed strategies; Graphical solution procedur		
46	08/05/19	Games with mixed strategies; Graphical solution procedur		
47	09/05/19	**Metaheuristics:** The nature of Metaheuristics		
48	10/05/19	Tabu Search		
49	14/05/19	Simulated Annealing, Genetic Algorithms.		
50	15/05/19	Question paper		

TEXT BOOKS:

1. D.S. Hira and P.K. Gupta, Operations Research, (Revised Edition), Published by S. Chand & Company Ltd, 2014

REFERENCE BOOKS:

1. S Kalavathy, Operation Research, Vikas Publishing House Pvt Limited, 01-Aug-2002
2. S D Sharma, Operation Research, Kedar Nath Ram Nath Publishers.

[Suthan R]
Staff Incharge

[Prof. C V Shanmukhaswamy]
HOD, CSE 01/04/19

1-4-19
[Dr. T. Hemalatha Naidu]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Semester: VI **Year: 2018-2019**

Course Title: COMPUTER GRAPHICS AND VISUALIZATION	Course Code: **15CS62**
Total contact Hours: 68	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 20
course plan author: Mr Renukaradhya P C	Date: 31/01/2019
Checked by: Prof. C V Shanmuka Swamy	Date: 31/01/2019

OBJECTIVES

- Explain hardware, software and OpenGL Graphics Primitives.
- Illustrate interactive computer graphic using the OpenGL.
- Design and implementation of algorithms for 2D graphics Primitives and attributes.
- Demonstrate Geometric transformations, viewing on both 2D and 3D objects.
- Infer the representation of curves, surfaces, Color and Illumination models

OUTCOMES

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate Geometric transformations on both 2D and 3D objects.
- Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No	DATE	TOPIC NAMES	TOPICS COVERED	REMARKS
1	1/2/2019	**Module-1: Overview: Computer Graphics and OpenGL:** Computer Graphics: Basics of computer graphics	COVERED	
2	2/2/2019	Application of Computer Graphics	COVERED	
3	4/2/2019	Video Display Devices: Random Scan and Raster Scan displays	COVERED	
4	5/2/2019	color CRT monitors, Flat panel displays.	COVERED	
5	6/2/2019	Raster-scan systems: video controller, raster scan Display processor, Graphics workstations and viewing systems	COVERED	
6	8/2/2019	Input devices, graphics networks, graphics on the internet, graphics software.	COVERED	
7	9/2/2019	OpenGL: Introduction to OpenGL ,coordinate reference frames,	COVERED	
8	11/2/2019	Specifying two-dimensional world coordinate reference frames in OpenGL,	COVERED	
9	12/2/2019	OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes	COVERED	
10	13/2/2019	OpenGL point attribute functions, OpenGL line attribute functions	COVERED	
11	15/2/2019	Line drawing algorithms(DDA, Beesenham's)	COVERED	
12	16/2/2019	circle generation algorithms (Bresenham's).	COVERED	
13	18/2/2019	**Module – 2: Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas	COVERED	
14	19/2/2019	OpenGL polygon fill area functions, fill area attributes.	COVERED	
15	20/2/2019	General scan line polygon fill algorithm	COVERED	
16	22/2/2019	OpenGL fill-area attribute functions.	COVERED	
17	23/2/2019	2DGeometric Transformations: Basic 2D Geometric Transformations	COVERED	
18	25/2/2019	Matrix representations and homogeneous coordinates.	COVERED	
19	26/2/2019	Inverse transformations,	COVERED	
20	27/2/2019	2D Composite transformations, Other 2D transformations	COVERED	
21	1/3/2019	Raster methods for geometric transformations	COVERED	
22	2/3/2019	OpenGL raster transformations, OpenGL geometric transformations function	COVERED	
23	4/3/2019	2D viewing: 2D viewing pipeline,	COVERED	
24	5/3/2019	OpenGL 2D viewing functions.	COVERED	

25	6/3/2019	**Module – 3: Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping: clipping window	covered	
26	8/3/2019	normalization and viewport transformations	covered	
27	9/3/2019	clipping algorithms,2D point clipping	covered	
28	11/3/2019	2D line clipping algorithms: cohen-sutherland line clipping	covered	
29	12/3/2019	only -polygon fill area clipping: Sutherland-Hodgeman polygon clipping algorithm only	covered	
30	13/3/2019	3DGeometric Transformations: 3D translation, rotation, scaling	covered	
31	18/3/2019	composite 3D transformations, other 3D transformations	covered	
32	19/3/2019	Affine transformations	covered	
33	20/3/2019	OpenGL geometric transformations functions	covered	
34	22/3/2019	Color Models: Properties of light, color models, RGB and CMY color models.	covered	
35	23/3/2019	Illumination Models: Light sources, basic illumination models-Ambient light	covered	
36	25/3/2019	diffuse reflection, specular and phong 10 Hours model, Corresponding openGL functions.	covered	
37	26/3/2019	**Module – 4: 3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts	covered	
38	27/3/2019	3D viewing pipeline,	covered	
39	1/4/2019	3D viewing coordinate parameters	covered	
40	2/4/2019	Transformation from world to viewing coordinates,	covered	
41	3/4/2019	Projection transformation	covered	
42	5/4/2019	orthogonal projections, perspective projections	covered	
43	6/4/2019	The viewport transformation and 3D screen coordinates.	covered	
44	8/4/2019	OpenGL 3D viewing functions.	covered	
45	9/4/2019	Visible Surface Detection Methods: Classification of visible surface Detection algorithms	covered	
46	10/4/2019	Back face detection	covered	
47	12/4/2019	Depth buffer method	covered	
48	13/4/2019	OpenGL visibility detection functions.	covered	
49	15/4/2019	**Module – 5 Input& interaction, Curves and Computer Animation:** Input and Interaction: Input devices	covered	
50	22/4/2019	Clients and servers, Display Lists	covered	
51	23/4/2019	Display Lists and Modelling	covered	
52	24/4/2019	Programming Event Driven Input, Menus Picking	covered	
53	26/4/2019	Building Interactive Models	covered	
54	27/4/2019	Animating Interactive programs	covered	
55	29/4/3018	Design of Interactive programs,	covered	
56	30/4/2019	Logic operations.	covered	
57	3/5/2019	Curved surfaces,	covered	
58	4/5/2019	quadric surfaces	covered	
59	6/5/2019	OpenGL Quadric-Surface and Cubic-Surface Functions	covered	
60	8/5/2019	Bezier Spline Curves,	covered	

61	10/5/2019	Bezier surfaces		
62	11/5/2019	OpenGL curve functions		
63	13/5/2019	Corresponding openGL functions.		
64	14/5/2019	Question paper Discussion		
65	15/5/2019	Question paper Discussion		
66	20/5/2019	Question paper Discussion		
67	21/5/2019	Question paper Discussion		
68	22/5/2019	Question paper Discussion		

Text Books:

1. Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd / 4th Edition, Pearson Education,2011

2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL, 5th edition. Pearson Education, 2008

Reference Books:

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Huges Computer graphics with OpenGL: pearson education

2. Xiang, Plastock : Computer Graphics , sham's outline series, 2nd edition, TMG.

3. Kelvin Sung, Peter Shirley, steven Baer : Interactive Computer Graphics, concepts and applications, Cengage Learning

4. M M Raiker, Computer Graphics using OpenGL, Filip learning/Elsevier

Mr. Ramaradhya P C
Staff-Incharge

Prof. C V Shanmuka Swamy
Head, Dept of CSE

Dr T Hemadri Naidu
Principal

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester: VI Semester **Year: 2018-19**

Course Title: PYTHON APPLICATION PROGRAMMING	**Course Code:** 15CS664
Total contact Hours: 50	**Duration of Exam:** 03 Hrs.
Total exam marks: 80	**Total I.A. marks:** 20
Course plan author: Ms.Tripthi V	**Date:** 31/01/2019
Checked by: Prof. C.V.Shanmuka Swamy	**Date:** 01/02/2019

Prerequisites: Object oriented concepts, Data structures, C.

Course objectives: This course will enable students to

- Learn Syntax and Semantics and create Functions in Python.
- Handle Strings and Files in Python.
- Understand Lists, Dictionaries and Regular expressions in Python.
- Implement Object Oriented Programming concepts in Python
- Build Web Services and introduction to Network and Database Programming in Python.

Course outcomes: The students should be able to:

- Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
- Demonstrate proficiency in handling Strings and File Systems.
- Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.
- Interpret the concepts of Object-Oriented Programming as used in Python.
- Implement exemplary applications related to Network Programming, Web Services and Databases in Python.

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COURSE PLAN

Name of the Course Instructor: Ms.Trupthi V **Course Code:** 15CS664

Course: PYTHON APPLICATION PROGRAMMING **Class:** VI SEM

Sl. No	Date	Topic	Topics Covered	Remarks
1	01/02/19	**MODULE 1:** Why should you learn to write programs,		
2	02/02/19	Variables,		
3	06/02/19	expressions and statements,		
4	07/02/19	expressions and statements continued		
5	08/02/19	expressions and statements continued		
6	09/02/19	Conditional execution,		
7	13/02/19	Conditional execution cont…		
8	14/02/19	Functions in python,		
9	15/02/19	Functions in python cont…,		
10	16/02/19	Functions in python cont…,		
11	20/02/19	**MODULE 2:** Iteration in python.		
12	21/02/19	Iteration statements in python cont….		
13	22/02/19	Loop patterns,		
14	23/02/19	Debugging.		
15	27/02/19	Strings in python.		
16	28/02/19	String comparison, string methods,		
17	01/03/19	Parsing strings , Format operator, Debugging		
19	03/03/19	Files Persistence, Opening files ,Text files and lines		
19	06/03/19	Using try, except, and open		
20	07/03/19	Writing files, Debugging.		
21	08/03/19	**MODULE 3:** Lists A list is a sequence , Lists are mutable ,Traversing a list,		
22	09/03/19	List operations, List slices, List methods,		
23	13/03/19	Lists and functions,Lists and strings ,Parsing lines.		
24	20/03/19	Dictionaries as a set of counters,		
25	21/03/19	Dictionaries and files, Looping and dictionaries, Advanced text parsing.		
26	22/03/19	Tuples are immutable, Comparing tuples, Tuple assignment .		
27	23/03/19	Dictionaries and tuples ,Multiple assignment with dictionaries ,The most common words		
28	27/03/19	Regular expressions		
29	28/03/19	Character matching in regular expressions, Extracting data using regular expressions		
30	03/04/19	Combining searching and extracting , Escape character		
31	04/04/19	**MODULE 4:** Classes and objects		
32	05/04/19	User-defined types, Rectangles ,		
33	10/04/19	Copying and Debugging.		

34	11/04/19	Classes and functions		
35	12/04/19	Classes and functions cont....		
36	13/04/19	Modifiers, Debugging.		
37	24/04/19	Classes and methods		
38	25/04/19	Classes and methods cont....		
39	26/04/19	The init method		
40	27/04/19	Polymorphism and Debugging.		
41	03/05/19	**MODULE 5:** Networked programs.		
42	04/05/19	Networked programs cont...		
43	08/05/19	Networked programs cont...		
44	09/05/19	Using Web Services		
45	10/05/19	Parsing XML ,Looping through nodes		
46	11/05/19	Application Programming Interfaces ,Google geo coding web service , Security and API usage		
47	15/05/19	Using databases and SQL		
48	22/05/19	Using databases and SQL cont...		
49	23/05/19	Programming with multiple tables		
50	23/05/19	Three kinds of keys ,Using JOIN to retrieve data .		Extra class

Text Books:

1. Charles R. Severance, "Python for Everybody: Exploring Data Using Python 3", 1st Edition, CreateSpace Indepenent Publishing Platform, 2016. (http://do1.drchuck.com/pythonlearn/EN_us/pythonlearn.pdf) (Chapters 1 – 13, 15)
2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2ndEdition, Green Tea Press, 2015. (http://greenteapress.com/thinkpython2/thinkpython2.pdf) (Chapters 15, 16, 17) (Download pdf files from the above links).

Reference Books:

1. Charles Dierbach, "Introduction to Computer Science Using Python", 1st Edition,Wiley India Pvt Ltd. ISBN-13: 978-8126556014
2. Mark Lutz, "Programming Python", 4th Edition, O'Reilly Media, 2005.ISBN-13:978-9350232873
3. Wesley J Chun, "Core Python Applications Programming", 3rd Edition, Pearson Education India, 2015. ISBN-13: 978-9332555365
4. Roberto Tamassia, Michael H Goldwasser, Michael T Goodrich, "Data Structures and Algorithms in Python",1stEdition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126562176
5. Reema Thareja, "Python Programming using problem solving approach", Oxford university press, 2017

[Ms.Trupthi V]
Staff Incharge

[Prof. C.V.Shivaprakasha Swamy]
Head, Dept of CSE

[Dr T. Hemadri Naidu]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

COURSE PLAN

***Cover Page*: Course Overview**
Semester: VI Semester **Year:2018-19**

Course Title: ***Operating Systems***	*Subject Code:* 15CS64
Total contact Hours: 53	*Duration of Exam:* 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Course plan author: Mr. Mallesh H L	*Date:31/01/2019*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 31/01/2019

***Prerequisites*:** None

Course objectives: This course will enable students to

- Introduce concepts and terminology used in OS
- Explain threading and multithreaded systems
- Illustrate process synchronization and concept of Deadlock
- Introduce Memory and Virtual memory management, File system and storage techniques

Course outcomes: The students should be able to:

- Demonstrate need for OS and different types of OS
- Apply suitable techniques for management of different resources
- Use processor, memory, storage and file system commands
- Realize the different concepts of OS in platform of usage through case studies

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY,TUMKUR 06
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2018-19 (Even Sem)

COURSE PLAN

Staff : Mr. Mallesh H L
Course : *Operating Systems*
Class :VI
Course Code : 15CS64

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
1	02/02/2019	**Module – 1: Introduction to operating systems, System structure** What operating systems Does		
2	04/02/2019	Computer System architecture; Operating System structure; Operating System operations; Process management.		
3	06/02/2019	Memory management; Storage management; Protection and security; Distributed system.		
4	07/02/2019	Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface.		
5	09/02/2019	System calls; Types of system calls; System programs.		
6	11/02/2019	Operating System design and implementation.		
7	13/02/2019	Operating System structure.		
8	14/02/2019	Virtual machines; Operating system generation; System boot.		
9	16/02/2019	**Process Management** Process concept; Process scheduling		
10	18/02/2019	Operations on processes; Inter process communication		
11	20/02/2019	**Module – 2: Multi-threaded Programming** Multi-Threaded Programming: Overview		
12	21/02/2019	Multithreading models.		
13	23/02/2019	Thread Libraries; threading issues.		
14	25/02/2019	Process Scheduling: Basic concepts; Scheduling criteria.		
15	27/02/2019	Scheduling algorithms.		
16	28/02/2019	Multiple-Processor scheduling; Thread scheduling.		
17	02/03/2019	**PROCESS SYNCHRONIZATION:** Synchronization basic concepts.		
18	06/03/2019	Critical section problem. Peterson's solution. Synchronization hardware		
19	07/03/2019	Semaphores.		
20	09/03/2019	Monitors.		
21	11/03/2019	**Module 3: DEADLOCKS:**System model; Deadlock characterization		
22	13/03/2019	Methods for handling deadlocks.		
23	18/03/2019	Deadlock prevention.		
24	20/03/2019	Deadlock avoidance.		
25	21/03/2019	Deadlock detection and recovery from deadlock.		
26	23/03/2019	Deadlocks continued.		
27	25/03/2019	**Memory Management:** Memory management strategies: Background; Swapping.		

28	27/03/2019	Contiguous memory allocation; Paging;		
29	28/03/2019	Structure of page table; Segmentation		
30	01/04/2019	Question papers salvation		
31	03/04/2019	**Module – 4: Virtual Memory Management**: Background.		
32	04/04/2019	Demand paging.		
33	08/04/2019	Copy-on-write; Page replacement.		
34	10/04/2019	Allocation of threads and thrashing.		
35	11/04/2019	Implementing File System: File system structure.		
36	13/04/2019	File system implementation; Directory implementation.		
37	15/04/2019	Allocation methods.		
38	22/04/2019	Allocation methods Contd…		
39	24/04/2019	Free space management		
40	25/04/2019	Free space management Contd…		
41	27/04/2019	**Module – 5: Secondary Storage Structures, Protection:** Mass Storage structures; Disk structure.		
42	29/04/2019	Disk attachment; Disk scheduling.		
43	02/05/2019	Swap space management.		
44	04/05/2019	Protection: Goals of protection.		
45	06/05/2019	Principles of protection, Domain of protection, Access matrix.		
46	08/05/2019	Domain of protection, Access matrix.		
47	09/05/2019	Implementation of access matrix.		
48	11/05/2019	Access matrix Continued		
49	13/05/2019	Access control.		
50	15/05/2019	Revocation of access rights. Capability-Based systems.		
51	20/5/2019	**Case Study: The Linux Operating System:** Linux history; Design principles;		
52	22/5/2019	Kernel modules; Process management; Scheduling; Memory Management;		
53	23/5/2019	File systems, Input and output; Inter-process communication.		

TEXT BOOKS:

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Principles 7th edition, Wiley-India, 2006

REFERENCE BOOKS:

1. Ann McHoes Ida M Flynn, Understanding Operating System, Cengage Learning, 6th Edition
2. D.M Dhamdhere, Operating Systems: A Concept Based Approach 3rd Ed, McGraw-Hill, 2013.
3. P.C.P. Bhatt, An Introduction to Operating Systems: Concepts and Practice 4th Edition, PHI(EEE), 2014.
4. William Stallings Operating Systems: Internals and Design Principles, 6th Edition, Pearson.

[Mallesh H L]
Staff Incharge

[Prof. C.Y Shanmukaswamy]
HOD, CSE Dept

[Dr. Hemadri Naidu T]
Principal

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2018-19 (EVEN Sem)

COURSE PLAN

Cover Page: Course Overview
Semester: VI Semester

Year: 2018-201

Course Title: **Cryptography, Network Security And Cyber Law**	*Course Code:* **15CS61**
Total contact Hours: **50**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Dr C D Guruprakash**	*Date:* **01/02/2019**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **01/02/2019**

Objectives:

This course will enable students to

- Explain the concepts of Cyber security
- Illustrate key management issues and solutions.
- Familiarize with Cryptography and very essential algorithms
- Introduce cyber Law and ethics to be followed.

Outcomes:

The student should be able to:

- Discuss cryptography and its need to various applications
- Design and develop simple cryptography algorithms
- Understand cyber security and need cyber Law

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
Module – 1 : Introduction – Cyber Attacks				
01	01/02/19	Cyber Attacks	Covered	
02	02/02/19	Defence Strategies and Techniques	Covered	
03	04/02/19	Guiding Principles	Covered	
04	05/02/19	Mathematical Background for Cryptography - Modulo Arithmetic's, The Greatest Comma Divisor	Covered	
05	08/02/19	Useful Algebraic Structures, Chinese Remainder Theorem	Covered	
06	09/02/19	Basics of Cryptography - Preliminaries	Covered	
07	11/02/19	Elementary Substitution Ciphers	Covered	
08	12/02/19	Elementary Transport Ciphers	Covered	
09	15/02/19	Other Cipher Properties	Covered	
10	16/02/19	Secret Key Cryptography – Product Ciphers,	Covered	
11	18/02/19	DES Construction		
Module -2 : Public Key Cryptography & RSA				
12	19/02/19	Public Key Cryptography and RSA – RSA Operations	Covered	
13	22/02/19	Why Does RSA Work?, Performance, Applications, Practical Issues	Covered	
14	23/02/19	Continue.	Covered	
15	25/02/19	Cryptographic Hash - Introduction	Covered	
16	26/02/19	Properties	Covered	
17	01/03/19	Construction, Applications and Performance	Covered	
18	02/03/19	The Birthday Attack	Covered	
19	05/03/19	Discrete Logarithm and its Applications – Introduction	Covered	
20	08/03/19	Diffie-Hellman Key Exchange	Covered	
21	09/03/19	Other Applications.	Covered	
Module -3 : Key Management				
22	11/03/19	Key Management – Introduction, Digital Certificates	Covered	
23	12/03/19	Public Key Infrastructure	Covered	
24	18/03/19	Identity–based Encryption	Covered	
25	19/03/19	Authentication–I - One way Authentication	Covered	
26	22/03/19	Mutual Authentication, Dictionary Attacks,	Covered	
27	23/03/19	Authentication – II – Centalised Authentication	Covered	
28	25/03/19	The Needham-Schroeder Protocol, Kerberos, Biometrics	Covered	
29	26/03/19	IPSec- Security at the Network Layer – Security at Different layers: Pros and Cons, IPSec in Action	Covered	
30	01/04/19	Internet Key Exchange (IKE) Protocol, Security Policy and IPSEC,	Covered	
31	02/04/19	Virtual Private Networks	Covered	
32	05/04/19	Security at the Transport Layer - Introduction, SSL Handshake Protocol,	Covered	
33	08/04/19	SSL Record Layer Protocol, OpenSSL	Covered	

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(Recognized by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)
Sira Road, Tumakuru - 572 106, Karnataka.
Phone: 0816-2212699 | Fax: 0816-2212608 | Email: info@shridevienggeering.org | Web: http://www.shridevienggeering.org

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: **Course Overview**
Semester **: IV** **Year: 2018-2019**

Course Title: DATA COMMUNICATION	*Course Code:* 17CS46
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam Marks: 60	*Total IA Marks:* 40
Course Plan Author: Mrs.Veena N D	*Date:* 28.01.2019
Checked by: Prof. C V Shanmukaswamy	*Date:* 30.01.2019

Prerequisites: None
Objectives:
The students will learn

1. The main objective of management is to secure maximum outputs with minimum efforts & resources.
2. Management is basically concerned with thinking & utilizing human, material & financial resources in such a manner that would result in best combination.
   This combination results in reduction of various costs.
3. Increasing the Efficiency of factors of Production.
4. Maximum Prosperity for Employer & Employees.
5. Human betterment & Social Justice.
6. How to avoid pollutions to have good health & maintain the same for future.

Outcomes:
The student should be

1. Ability to analyze the linkages between Business Strategy and Business Value Creation.
2. Ability to analyze and understand Costs & Benefits of the Project.
3. Define what entrepreneurship is, consider how everyone has the potential to be entrepreneurial, and to explore the constituents of the entrepreneurial process.
4. Examine the key resources required to exploit an innovative idea or opportunity to develop an existing business, launch a new venture, or initiate a social enterprise.
5. Identify the key steps required for exploiting an innovative idea or opportunity to develop an existing business, launch a new venture, or initiate a social enterprise utilizing the technical skills.

		Module -4 : IEEE 802.11 Wireless LAN Security		
34	09/04/19	IEEE 802.11 Wireless LAN Security – Background	Covered	
35	12/04/19	Authentication, Confidentiality and Integrity, Viruses, Worms, and Other Malware	Covered	
36	13/04/19	Firewalls – Basics, Practical Issues	Covered	
37	15/04/19	Intrusion Prevention and Detection - Introduction, Prevention Versus Detection	Covered	
38	22/04/19	Types of Instruction Detection Systems	Covered	
39	23/04/19	DDoS Attacks Prevention/Detection	Covered	
40	26/04/19	Web Service Security – Motivation, Technologies for Web Services	Covered	
41	27/04/19	WS- Security, SAML, Other Standards.	Covered	
		Module -5 : IT act aim and Objectives		
42	29/04/19	IT act aim and objectives, Scope of the act, Major Concepts	Covered	
43	30/04/19	Important provisions, Attribution, acknowledgement,	Covered	
44	03/05/19	dispatch of electronic records	Covered	
45	04/05/19	Secure electronic records and secure digital signatures	Covered	
46	06/05/19	Regulation of certifying authorities: Appointment of Controller and Other officers	Covered	
47	10/05/19	Digital Signature certificates	Covered	
48	11/05/19	Duties of Subscribers, Penalties and adjudication	Covered	
49	13/05/19	The cyber regulations appellate tribunal, Offences	Covered	
50	14/05/19	Network service providers not to be liable in certain cases	Covered	
51	20/05/19	Miscellaneous Provisions.	Covered	
52	21/05/19	Question paper discussion	Covered	
53	21/05/19	Question paper discussion	Covered	Extra Class

Text Books:

1. Cryptography, Network Security and Cyber Laws – Bernard Menezes, Cengage Learning, 2010 edition (Chapters-1,3,4,5,6,7,8,9,10,11,12,13,14,15,19(19.1- 19.5),21(21.1-21.2),22(22.1-22.4),25

ference Books:

1. Cryptography and Network Security- Behrouz A Forouzan, Debdeep Mukhopadhyay, Mc-GrawHill, 3rd Edition, 2015.
2. Cryptography and Network Security- William Stallings, Pearson Education, 7th Edition.
3. Cyber Law simplified- Vivek Sood, Mc-GrawHill, 11th reprint , 2013.
4. Cyber security and Cyber Laws, Alfred Basta, Nadine Basta, Mary brown, ravindra kumar, Cengage learning

[Dr C D Guruprakash]
Staff In charge

[Prof C. V Shanmuka Swamy]
HOD, CSE

07.02.24

[Dr. T. Hemadri Naidu]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
(Managed by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)
Sira Road, Tumakuru - 572 106, Karnataka.
Phone: 0816-2212827 | Fax: 0816-2211028 | Email: info@shridevienggcollege.org | Web: http://www.shridevienggcollege.org

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN
PLANNED AND EXECUTED

Name of the Course Instructor: Mrs.Veena N D **Course Code: 17CS46**

Course: DATA COMMUNICATION **Class: IV SEM**

Sl. No	Date	Topic Planned	Executed	Remarks
1	02/02/2019	**MODULE-1: Introduction:** Data Communications	Covered	
2	05/02/2019	Networks, Network Types	Covered	
3	07/02/2019	Internet History, Standards and Administration	Covered	
4	07/02/2019	**Networks Models**	Covered	
5	09/02/2019	Protocol Layering, TCP/IP Protocol suite	Covered	
6	12/02/2019	The OSI model	Covered	
7	14/02/2019	**Introduction to Physical Layer-1**	Covered	
8	14/02/2019	Data and Signals, Digital Signals, Transmission Impairment	Covered	
9	16/02/2019	Data Rate limits, Performance, **Digital Transmission:**	Covered	
10	19/02/2019	Digital to digital conversion	Covered	
11	21/02/2019	**Module 2: Physical Layer-2:**	Covered	
12	21/02/2019	Analog to digital conversion (only PCM)	Covered	
13	23/02/2019	Transmission Modes	Covered	
14	26/02/2019	**Analog Transmission:** Digital to analog conversion	Covered	
15	28/02/2019	**Bandwidth Utilization**	Covered	
16	28/02/2019	Multiplexing and Spread Spectrum	Covered	
17	02/03/2019	**Switching:** Introduction	Covered	
18	05/03/2019	Circuit Switched Networks	Covered	
19	07/03/2019	Packet switching	Covered	
20	07/03/2019	Packet switching	Covered	
21	09/03/2019	**Module 3: Error Detection and Correction**	Covered	
22	12/03/2019	Introduction, Block coding	Covered	
23	19/03/2019	Cyclic codes, Checksum	Covered	
24	21/03/2019	Forward error correction	Covered	
25	21/03/2019	**Data link control:** DLC services	Covered	
26	23/03/2019	Data link layer protocols	Covered	
27	26/03/2019	HDLC	Covered	
28	28/03/2019	Point to Point protocol	Covered	
29	28/03/2019	Protocol Framing,	Covered	
30	02/04/2019	Transition phases	Covered	
31	04/04/2019	**Module 4: Media Access control**	Covered	
32	04/04/2019	Random Access	Covered	
33	09/04/2019	Controlled Access and Channelization	Covered	
34	11/04/2019	**Wired LANs Ethernet**	Covered	

35	11/04/2019	Ethernet Protocol	Covered	
36	13/04/2019	Standard Ethernet, Fast Ethernet	Covered	
37	23/04/2019	Gigabit Ethernet and 10 Gigabit Ethernet	Covered	
38	25/04/2019	**Wireless LANs: Introduction**	Covered	
39	25/04/2019	IEEE 802.11 Project	Covered	
40	27/04/2019	Bluetooth.	Covered	
41	30/04/2019	**Module 5: Other wireless Networks**	Covered	
42	02/05/2019	WIMAX, Cellular Telephony	Covered	
43	02/05/2019	Satellite networks	Covered	
44	02/05/2019	**Network layer Protocols**	Covered	
45	04/05/2019	Internet Protocol	Covered	
46	09/05/2019	ICMPv4,Mobile IP	Covered	
47	09/05/2019	**Next generation IP**	Covered	
48	11/05/2019	IPv6 addressing, The IPv6 Protocol	Covered	
49	14/05/2019	The ICMPv6 Protocol	Covered	
50	16/05/2019	Transition from IPv4 to IPv6	Covered	
51	18/05/2019	Revision	Covered	
52	23/05/2019	Revision	Covered	
53	23/05/2019	Revision	Covered	
54	25/05/2019	Revision	Covered	

TEXT BOOKS:

1. Behrouz A. Forouzan, Data Communications and Networking 5E, 5th Edition, Tata McGraw-Hill, 2013.

(Chapters 1.1 to 1.5, 2.1 to 2.3, 3.1, 3.3 to 3.6, 4.1 to 4.3,
5.1, 6.1, 6.2, 8.1 to 8.3, 10.1 to 10.5, 11.1 to 11.4,
12.1 to 12.3, 13.1 to 13.5, 15.1 to 15.3, 16.1 to 16.3, 19.1 to 19.3,
22.1 to 22.4)

REFERENCE BOOKS:

1. Alberto Leon-Garcia and Indra Widjaja: Communication Networks – Fundamental Concepts and Key architectures, 2nd Edition Tata McGraw-Hill, 2004

2. William Stallings: Data and Computer Communication, 8th Edition, Pearson Education, 2007

3. Larry L. Peterson and Bruce S. Davie: Computer Networks – A Systems Approach, 4th edition, Elsevier, 2007

4. Nader F. Mir: Computer and Communication Networks, Pearson Education, 2007

Mrs.Veena N D
Staff -In -charge

Prof. C V Shanmukaswamy
Head, Dept of CSE

Dr. Hemadri Naidu T
Principal

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (Odd Sem)

Staff: Mr.Kiran.G.M & Mr.Basavesha D — Class: III 'A1'

(WEDNESDAY)

Course Name: Data Structures and its Applications Laboratory — Course Code: 18CSL38

SL. NO	DATE	TOPICS PLANNED	REMARKS
01	31/07/19	Sample Programs	
02	07/08/19	1. Design, Develop and Implement a menu driven Program in C for the following **Array** operations a. Creating an Array of **N** Integer Elements b. Display of Array Elements with Suitable Headings c. Inserting an Element (**ELEM**) at a given valid Position (**POS**) d. Deleting an Element at a given valid Position(**POS**) e. Exit Support the program with functions for each of the above operations.	
03	14/08/19	2. Design, Develop and Implement a Program in C for the following operations on **Strings** a. Read a main String (**STR**), a Pattern String (**PAT**) and a Replace String (**REP**) b. Perform Pattern Matching Operation: Find and Replace all occurrences of **PAT** in **STR** with **REP** if **PAT** exists in **STR**. Report suitable messages in case **PAT** does not exist in **STR**. Support the program with functions for each of the above operations. Don't use Built-in functions.	
04	21/08/19	3. Design, Develop and Implement a menu driven Program in C for the following operations on **STACK** of Integers (Array Implementation of Stack with maximum size **MAX**) a. ***Push*** an Element on to Stack b. ***Pop*** an Element from Stack c. Demonstrate how Stack can be used to check ***Palindrome*** d. Demonstrate ***Overflow*** and ***Underflow*** situations on Stack e. Display the status of Stack f. Exit Support the program with appropriate functions for each of the above operations	
05	28/08/19	4. Design, Develop and Implement a Program in C for converting an Infix Expression to Postfix Expression. Program should support for both parenthesized and free parenthesized expressions with the operators: +, -, *, /, %(**Remainder**), ^(**Power**) and **alphanumeric** operands.	
06	04/09/19	5.Design, Develop and Implement a Program in C for the following Stack Applications a. Evaluation of **Suffix expression** with single digit operands and operators: +, -, *, /, %, ^ b. Solving **Tower of Hanoi** problem with **n** disks	
07	14/09/19	6. Design, Develop and Implement a menu driven Program in C for the following operations on **Circular QUEUE** of Characters (Array Implementation of Queue with maximum size **MAX**) a. Insert an Element on to Circular QUEUE b. Delete an Element from Circular QUEUE c. Demonstrate ***Overflow*** and ***Underflow*** situations on Circular QUEUE d. Display the status of Circular QUEUE e. Exit Support the program with appropriate functions for each of the above operations	

		LINTERNALS
08	12/09/19	7.Design, Develop and Implement a menu driven Program in C for the following operations on **Singly Linked List (SLL)** of Student Data with the fields: *USN, Name, Branch, Sem, PhNo* a. Create a **SLL** of **N** Students Data by using *front insertion* b. Display the status of **SLL** and count the number of nodes in it c. Perform Insertion / Deletion at End of **SLL** d. Perform Insertion / Deletion at Front of **SLL (Demonstration of stack)** e. Exit
09	25/09/19	8.Design, Develop and Implement a menu driven Program in C for the following operations on **Doubly Linked List (DLL)** of Employee Data with the fields: *SSN, Name, Dept, Designation, Sal, PhNo* a. Create a **DLL** of **N** Employees Data by using *end insertion* b. Display the status of **DLL** and count the number of nodes in it c. Perform Insertion and Deletion at End of **DLL** d. Perform Insertion and Deletion at Front of **DLL** e. Demonstrate how this **DLL** can be used as **Double Ended Queue** f. Exit
10	09/10/19	9.Design, Develop and Implement a Program in C for the following operations on **Singly Circular Linked List (SCLL)** with header nodes a. Represent and Evaluate a Polynomial **P(x,y,z) = 6x²y²z²-4yz³+3xy²z+2xyz-2xyz** b. Find the sum of two polynomials **POLY1(x,y,z)** and **POLY2(x,y,z)** and store the result in **POLYSUM(x,y,z)** Support the program with appropriate functions for each of the above operations
11	23/10/19	10. Design, Develop and Implement a menu driven Program in C for the following operations on **Binary Search Tree (BST)** of Integers a. Create a BST of **N** Integers: 6, 9, 5, 2, 8, 15, 24, 14, 7, 8, 5, 2 b. Traverse the BST in Inorder, Preorder and Post Order c. Search the BST for a given element **(KEY)** and report the appropriate message d. Exit
12	30/10/19	11.Design, Develop and Implement a Program in C for the following operations on **Graph(G)** of Cities a. Create a Graph of **N** cities using Adjacency Matrix b. Print all the nodes **reachable** from a given starting node in a digraph using DFS/BFS method
13	06/11/19	12. Given a File of **N** employee records with a set **K** of Keys(4-digit) which uniquely determine the records in file **F**. Assume that file **F** is maintained in memory by a Hash Table(HT) of **m** memory locations with **L** as the set of memory addresses (2-digit) of locations in HT. Let the keys in **K** and addresses in **L** are Integers. Design and develop a Program in C that uses Hash function **H: K →L** as **H(K)=K** mod **m** (**remainder** method), and implement hashing technique to map a given key **K** to the address space **L**. Resolve the collision (if any) using **linear probing**.
14	13/11/19	**INTERNALS-II**
15	20/11/19	**INTERNALS-III**
16	27/11/19	**Revision**

Note: In the examination each student picks one question from a lot of all the 14 questions.

[Mr.Ritesh G.M & Mr.Basavesha D]
Staff In charge

[Prof. C V Shanmuka Swamy]
HOD, CSE

PRINCIPAL
SIET, TUMAKURU.

SIRIGA VT

SIRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (Odd Sem)

Staff: Mr.Kiran.G.M & Mr.Basavesha D **Class: III 'A2' (MONDAY)**
Course Name: Data Structures and its Applications Laboratory **Course Code: 18CSL38**

SL. NO.	DATE	TOPICS PLANNED	REMARKS
01	29/07/19	Sample Programs	
02	05/08/19	1. Design, Develop and Implement a menu driven Program in C for the following **Array** operations a. Creating an Array of **N** Integer Elements b. Display of Array Elements with Suitable Headings c. Inserting an Element (**ELEM**) at a given valid Position (**POS**) d. Deleting an Element at a given valid Position(**POS**) e. Exit. Support the program with functions for each of the above operations.	
03	19/08/19	2. Design, Develop and Implement a Program in C for the following operationson **Strings** a. Read a main String (**STR**), a Pattern String (**PAT**) and a Replace String (**REP**) b. Perform Pattern Matching Operation: Find and Replace all occurrences of **PAT** in **STR** with **REP** if **PAT** exists in **STR**. Report suitable messages in case **PAT** does not exist in **STR**. Support the program with functions for each of the above operations. Don't use Built-in functions.	
04	26/08/19	4. Design, Develop and Implement a menu driven Program in C for the following operations on **STACK** of Integers (Array Implementation of Stack with maximum size **MAX**) a. ***Push*** an Element on to Stack b. ***Pop*** an Element from Stack c. Demonstrate how Stack can be used to check ***Palindrome*** d. Demonstrate ***Overflow*** and ***Underflow*** situations on Stack e. Display the status of Stack f. Exit Support the program with appropriate functions for each of the above operations	
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07	23/09/19	6. Design, Develop and Implement a menu driven Program in C for the following operations on **Circular QUEUE** of Characters (Array Implementation of Queue with maximum size **MAX**) a. Insert an Element on to Circular QUEUE b. Delete an Element from Circular QUEUE c. Demonstrate ***Overflow*** and ***Underflow*** situations on Circular QUEUE d. Display the status of Circular QUEUE e. Exit Support the program with appropriate functions for each of the above	

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13	18/11/19	12. Given a File of **N** employee records with a set **K** of Keys(4-digit) which uniquely determine the records in file **F**. Assume that file **F** is maintained in memory by a Hash Table(HT) of **m** memory locations with **L** as the set of memory addresses (2-digit) of locations in HT. Let the keys in **K** and addresses in **L** are Integers. Design and develop a Program in C that uses Hash function **H: K →L** as **H(K)= K** mod **m (remainder** method), and implement hashing technique to map a given key **K** to the address space **L**. Resolve the collision (if any) using **linear probing**.	
14	25/11/19	**INTERNALS-II**	
15	25.11/19	**INTERNALS-III**	Extra

Note: In the examination each student picks one question from a lot of *all* the 14 questions.

[Mr.Kiran G.M & Mr.Basavaraj D]
Staff In charge

PRINCIPAL
BIET, TUMAKURU

[Prof. C. C. Shoganka Swamy]
HOD, CSE

Shridevi Institute of Engineering and Technology-Tumakuru-06
(An ISO 9001-2015 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2019-20(ODD Semester)

COURSE LECTURE PLAN

Cover Page: **Course Overview**
Semester : **V** **Year: 2019-2020**

Course Title: **Management and Entrepreneurship for IT Industry**	*Subject Code:* **17CS51**
Total contact Hours: 64	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
Lesson plan author: Mr. Basavesha D	*Date:* 01/08/2019
Checked by: Prof. C V Shanmukaswamy	*Date:* 01/08/2019

Course objectives:

This course will enable students to

- Explain the principles of management, organization and entrepreneur.
- Discuss on planning, staffing, ERP and their importance.
- Infer the importance of intellectual property rights and relate the institutional support

Course outcomes:

After studying this course, students will be able to:

- Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship.
- Utilize the resources available effectively through ERP.
- Make use of IPRs and institutional support in entrepreneurship.

Shridevi Institute of Engineering and Technology-Tumakuru-06
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	25/07/19	**MODULE-1. Introduction** :- Meaning, Nature and characteristics of Management	Covered	
02	26/07/19	Scope and functional areas of management,	Covered	
03	27/07/19	Goals of Management, Levels of Management	Covered	
04	30/07/19	brief overview of evolution of management theories	Covered	
05	01/08/19	Planning- Nature, importance,	Covered	
06	02/08/19	types of plans, steps in planning,	Covered	
07	03/08/19	Organizing- nature and purpose,	Covered	
08	06/08/19	types of Organization,	Covered	
09	08/08/19	types of Organization continued...	Covered	
10	09/08/19	Staffing- meaning,	Covered	
11	10/08/19	process of recruitment and selection	Covered	
12	13/08/19	process of recruitment and selection cont....	Covered	
			Covered	
13	16/08/19	**MODULE-2. Directing and controlling-**	Covered	
14	17/08/19	meaning and nature of directing	Covered	
15	20/08/19	leadership styles,	Covered	
16	22/08/19	motivation Theories,	Covered	
17	23/08/19	Communication- Meaning and importance,	Covered	
18	24/08/19	Communication- Meaning and importance continued.....	Covered	
19	27/08/19	Coordination meaning and importance,	Covered	
20	29/08/19	Coordination meaning and importance continued.....	Covered	
21	30/08/19	Controlling- meaning,	Covered	
22	31/08/19	steps in controlling,	Covered	
23	03/09/19	methods of establishing control	Covered	
24	10/09/19	methods of establishing control cont.....	Covered	
			Covered	
25	12/09/19	**MODULE-3. Entrepreneur** – meaning of entrepreneur,	Covered	
26	13/09/19	characteristics of entrepreneurs,	Covered	
27	14/09/19	classification and types of entrepreneurs,	Covered	
28	17/09/19	various stages in entrepreneurial process,	Covered	
29	19/09/19	role of entrepreneurs in economic development,	Covered	
30	20/09/16	Entrepreneurship in India and barriers to entrepreneurship,	Covered	
31	21/09/19	Identification of business opportunities,	Covered	
32	24/09/19	market feasibility study,	Covered	
33	26/09/19	technical feasibility stud	Covered	
34	27/09/19	financial feasibility study and social feasibility study	Covered	
35	01/10/19	financial feasibility study and social feasibility study continued.....	Covered	
36	03/10/19	financial feasibility study and social feasibility study continued.....	Covered	
			Covered	
37	04/10/19	**MODULE-4. Preparation of project and ERP** - meaning of project,	Covered	

38	05/10/19	project identification,	Covered	
39	08/10/19	project selection,	Covered	
40	10/10/19	project report, need and significance of project report,	Covered	
41	11/10/19	contents, formulation,	Covered	
42	12/10/19	guidelines by planning commission for project report,	Covered	
43	17/10/19	**Resource Planning: Meaning and Importance- ERP**	Covered	
44	18/10/19	**ERP** and Functional areas of Management	Covered	
45	19/10/19	Marketing / Sales- Supply Chain Management,	Covered	
46	22/10/19	Finance and Accounting	Covered	
47	24/10/19	Human Resources – Types of reports and methods of report generation	Covered	
48	25/10/19	Human Resources – Types of reports and methods of report Generation cont....	Covered	
			Covered	
49	26/10/19	**MODULE-5. Micro and Small Enterprises:** Definition of micro and small enterprises,	Covered	
50	31/10/19	characteristics and advantages of micro and small enterprises,	Covered	
51	01/11/19	steps in establishing micro and small enterprises,	Covered	
52	02/11/19	Government of India indusial policy 2007 on micro and small enterprises,	Covered	
53	05/11/19	case study (Microsoft), Case study(Captain G R Gopinath)	Covered	
54	07/11/19	Case study (N R Narayana Murthy & Infosys),	Covered	
55	08/11/19	**Institutional support:** MSME-DI, NSIC,	Covered	
56	09/11/19	SIDBI, KIADB, KSSIDC,	Covered	
57	12/11/19	TECSOK, KSFC,	Covered	
58	14/11/19	DIC and District level single window agency,	Covered	
59	16/11/19	**Introduction to IPR.**	Covered	
60	19/11/19	Introduction to IPR cont....	Covered	
			Covered	
61	26/11/19	Revision, Question Paper Discussion	Covered	
62	28/11/19	Revision, Question Paper Discussion	Covered	
63	29/11/19	Revision, Question Paper Discussion	Covered	
64	30/11/19	Revision, Question Paper Discussion	Covered	

Text Books:

1. Principles of Management -P. C. Tripathi, P. N. Reddy, Tata McGraw Hill, 4th / 6th Edition, 2010.
2. Dynamics of Entrepreneurial Development & Management -Vasant Desai Himalaya Publishing House.
3. Entrepreneurship Development -Small Business Enterprises -Poornima M Charantimath Pearson Education – 2006.
4. Management and Entrepreneurship – Kanishka Bedi- Oxford University Press-2019

Reference Books:

1. Management Fundamentals -Concepts, Application, Skill Development Robert Lusier Thomson.
2. Entrepreneurship Development -S S Khanka -S Chand & Co.
3. Management -Stephen Robbins -Pearson Education /PHI -19th Edition, 2003

[Mr. Basavesha D]
Staff Incharge

[Prof. C V Shanmukaswamy]
Head, Dept of CSE

[Dr. Hemadri Naidu T]
Principal

PRINCIPAL
SHRI SIDDHARTHA INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572105

Shridevi Institute of Engineering and Technology, Tumkur
(An ISO 9001:2008 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: **Subject Overview**
Semester: V Semester **Year:2019-20**

Subject Title: OBJECT-ORIENTED MODELING AND DESIGN	*Subject Code:* 17CS551
Total contact Hours: 60	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
course plan author: Mr.Renukaradhya P S	*Date:* 24/07/2019
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 25/07/2019

Prerequisites: None

Objectives:
The students will learn

- Demonstrate concept of use-case model, sequence model and state chart model for a given problem.
- Explain the facets of the unified process approach to design and build a Software system.
- Translate the requirements into implementation for Object Oriented design
- Choose an appropriate design pattern to facilitate development procedure.

Outcomes:

The student should be

- Describe the concepts of object-oriented and basic class modelling.
- Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.
- Choose and apply a befitting design pattern for the given problem.

SHREEDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06

DEPARTMENT OF COMPUTER SCIENCE & ENGG.

Academic Year 2019-20 (odd Sem)

COURSE PLAN

Staff : Mr.RamLaradhya P C

Class : V

Subject : Object Oriented Modeling And Design

Sub Code : 17CS551

Sl. No	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
1	27/07/19	**Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development?	Covered	
2	29/07/19	OO Themes; Evidence for usefulness of OO development.	Covered	
3	30/07/19	OO modelling history. Modelling as Design technique: Modelling, abstraction;	Covered	
4	31/07/19	The Three models. Class Modelling: Object and Class Concept;	Covered	
5	03/08/19	Link and associations concepts; Generalization and Inheritance;	Covered	
6	05/08/19	A sample class model; Navigation of class models; Advanced Class Modelling;	Covered	
7	06/08/19	Advanced object and class concepts; Association ends;	Covered	
8	07/08/19	N-ary associations; Aggregation; Abstract classes;	Covered	
9	10/08/19	Multiple inheritance; Metadata; Reification; Constraints;	Covered	
10	13/08/19	Derived Data; Packages; Question papers solvation	Covered	
			Covered	
			Covered	
11	14/08/19	**Module – 2:** UseCase Modelling and Detailed Requirements	Covered	
12	17/08/19	Overview; Detailed objectoriented Requirements definitions	Covered	
13	19/08/19	System Processes-A use case/Scenario view	Covered	
14	20/08/19	Identifying Input and output-The System sequence diagram	Covered	
15	21/08/19	Identifying Input and outputs-The System sequence diagram cont	Covered	
16	24/08/19	Identifying Object Behaviour	Covered	
17	28/08/19	Identifying Object Behaviour cont	Covered	
18	27/08/19	The state chart Diagram	Covered	
19	28/08/19	Integrated Object-oriented Models	Covered	
20	31/08/19	Question papers solvation	Covered	
			Covered	
			Covered	
21	03/09/19	**Module – 3:** Process Overview	Covered	
22	04/09/19	System Conception and Domain Analysis	Covered	
23	09/09/19	Process Overview: Development stages.	Covered	
24	14/09/19	Development life Cycle	Covered	
25	16/09/19	System Conception: Devising a system concept	Covered	
26	17/09/19	Elaborating a concept; preparing a problem statement	Covered	
27	18/09/19	Domain Analysis: Overview of analysis	Covered	
28	21/09/19	Domain Class model: Domain state model	Covered	
29	23/09/19	Domain interaction model Iterating the analysis	Covered	
30	24/09/19	Question papers solvation	Covered	
			Covered	
			Covered	

			Covered
34	25/09/19	**Module – 4:** Use case Realization- The Design Discipline within up iterations.	Covered
35	30/09/19	Object Oriented Design-The Bridge between Requirements and Implementation	Covered
36	01/10/19	Object Oriented Design-The Bridge between Requirements and Implementation cont...	Covered
37	05/10/19	Design Classes and Design within Class Diagrams.	Covered
38	09/10/19	Interaction Diagrams-Realizing Use Case and defining methods.	Covered
39	12/10/19	Designing with Communication Diagrams	Covered
40	19/10/19	Updating the Design Class Diagram.	Covered
41	21/10/19	Package Diagrams-Structuring the Major Components.	Covered
42	22/10/19	Implementation Issues for Three-Layer Design	Covered
43	23/10/19	Question papers solvation	Covered
			Covered
			Covered
44	26/10/19	**Module – 5:** Design Patterns.	Covered
45	28/10/19	Introduction: what is a design pattern?	Covered
46	30/10/19	Introduction: what is a design pattern?	Covered
47	02/11/19	Describing design patterns.	Covered
48	04/11/19	the catalogue of design patterns.	Covered
49	05/11/19	Organizing the catalogue.	Covered
50	06/11/19	Organizing the catalogue.	Covered
51	09/11/19	Organizing the catalogue.	Covered
52	11/11/19	How design patterns solve design problems.	Covered
53	12/11/19	How design patterns solve design problems.	Covered
54	13/11/19	how to select a design patterns	Covered
55	16/11/19	how to use a design pattern.	Covered
56	18/11/19	Creational patterns: prototype and singleton (only).	Covered
57	19/11/19	Creational patterns: prototype and singleton (only) cont...	Covered
58	20/11/19	Structural patterns adaptor and proxy (only)	Covered
59	25/11/19	Question papers solvation	Covered
60	26/11/19	Question papers solvation	Covered
61	27/11/19	Question papers solvation	Covered
62	30/11/19	Question papers solvation	Covered

TEXT BOOKS:

1. Michael Blaha, James Rumbaugh: Object Oriented Modelling and Design with UML, 2nd Edition, Pearson Education 2005
2. Satzinger, Jackson and Burd: Object-Oriented Analysis & Design with the Unified Process, Cengage Learning, 2005
3. Erich Gamma, Richard Helm, Ralph Johnson and john Vlissides: Design Patterns – Elements of Reusable Object-Oriented Software, Pearson Education 2003

REFERENCE BOOKS:

1. Grady Booch et. al.: Object-Oriented Analysis and Design with Applications,3rd Edition,Pearson Education,2007.
2. Frank Buschmann, RegineMeunier, Hans Rohnert, Peter Sommerlad, Michel Stal Pattern -Oriented Software Architecture: A system of patterns , Volume 1, John Wiley and Sons,2007
3. Booch, Jacobson, Rumbaugh : Object-Oriented Analysis and Design with Applications, 3rd edition, pearson, Reprint 2013

[Mr. Vinod Kavadhya P C]
Staff Incharge

[Prof. [illegible]]
HOD, CSE

[Dr. T Hemadri Naidu]
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

Shridevi Institute of Engineering and Technology-Tumkur
(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: **Subject Overview**
Semester: **V Semester** **Year:2019-20**

Subject Title: **OBJECT-ORIENTED MODELING AND DESIGN**	*Subject Code:* 17IS551
Total contact Hours: 60	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
course plan author: Mr.Renukamurthy A P C	*Date:* 24/07/2019
Checked by: Prof. H R Kumar	*Date:* 24/07/2019

Prerequisites: None

Objectives:
The students will learn

- Demonstrate concept of use-case model, sequence model and state chart model for a given problem.
- Explain the facets of the unified process approach to design and build a Software system
- Translate the requirements into implementation for Object Oriented design
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Outcomes:

The student should be

Describe the concepts of object oriented and basic class modelling.

Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.

Choose and apply a befitting design pattern for the given problem.

SHRIDEVI

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR
DEPARTMENT OF INFORMATION SCIENCE & ENGG.
Academic Year 2019-20 (odd Sem)
COURSE PLAN

Staff : Mr.Renukaradhya P C
Subject : Object Oriented Modeling And Design

Class :V
Sub Code : 17IS551

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
		PART-A		
1	25/07/19	**Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development?	Covered	
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3	30/07/19	OO modelling history. Modelling as Design technique: Modelling, abstraction;	Covered	
4	31/07/19	The Three models. Class Modelling: Object and Class Concept;	Covered	
5	03/08/19	Link and associations concepts; Generalization and Inheritance;	Covered	
6	05/08/19	A sample class model; Navigation of class models; Advanced Class Modelling;	Covered	
7	06/08/19	Advanced object and class concepts; Association ends;	Covered	
8	07/08/19	N-ary associations; Aggregation; Abstract classes;	Covered	
9	10/08/19	Multiple inheritance; Metadata; Reification; Constraints;	Covered	
10	13/08/19	Derived Data; Packages; Question papers solution	Covered	
			Covered	
			Covered	
11	14/08/19	**Module – 2:** UseCase Modelling and Detailed Requirements	Covered	
12	17/08/19	Overview; Detailed object-oriented Requirements definitions;	Covered	
13	19/08/19	System Processes-A use case Scenario view	Covered	
14	20/08/19	Identifying Input and outputs-The System sequence diagram	Covered	
15	21/08/19	Identifying Input and outputs-The System sequence diagram cont...	Covered	
16	24/08/19	Identifying Object Behaviour	Covered	
17	26/08/19	Identifying Object Behaviour cont...	Covered	
18	27/08/19	The state chart Diagram	Covered	
19	28/08/19	Integrated Object-oriented Models	Covered	
20	31/08/19	Question papers solution	Covered	
			Covered	
			Covered	
21	03/09/19	**Module – 3:** Process Overview	Covered	
22	04/09/19	System Conception and Domain Analysis	Covered	
23	09/09/19	Process Overview: Development stages;	Covered	
24	14/09/19	Development life Cycle	Covered	
25	16/09/19	System Conception: Devising a system concept	Covered	
26	17/09/19	Elaborating a concept, preparing a problem statement	Covered	
27	18/09/19	Domain Analysis: Overview of analysis	Covered	
28	21/09/19	Domain Class model: Domain state model	Covered	
29	23/09/19	Domain interaction model: Iterating the analysis	Covered	
30	24/09/19	Question papers solution	Covered	
			Covered	
			Covered	

	/10/19	**Module** – 4: Use case Realization: The Design Discipline within iterations	Covered
	30/09/19	Object Oriented Design-The Bridge between Requirements and Implementation	Covered
33	01/10/19	Object Oriented Design-The Bridge between Requirements and Implementation cont.	Covered
34	05/10/19	Design Classes and Design within Class Diagrams	Covered
35	08/10/19	Interaction Diagrams-Realizing Use Case and defining methods.	Covered
36	12/10/19	Designing with Communication Diagrams	Covered
37	19/10/19	Updating the Design Class Diagram	Covered
38	21/10/19	Package Diagrams-Structuring the Major Components.	Covered
39	22/10/19	Implementation Issues for Three-Layer Design	Covered
40	25/10/19	Question papers solvation	Covered
			Covered
			Covered
41	26/10/19	**Module** – 5: Design Patterns	Covered
42	28/10/19	Introduction: what is a design pattern?	Covered
	29/10/19	Introduction: what is a design pattern?	Covered
44	01/11/19	Describing design patterns.	Covered
45	04/11/19	the catalogue of design patterns.	Covered
46	05/11/19	Organizing the catalogue.	Covered
47	06/11/19	Organizing the catalogue.	Covered
48	08/11/19	Organizing the catalogue.	Covered
49	11/11/19	How design patterns solve design problems.	Covered
50	12/11/19	How design patterns solve design problems.	Covered
51	13/11/19	how to select a design patterns	Covered
52	16/11/19	how to use a design pattern	Covered
53	18/11/19	Creational patterns: prototype and singleton (only)	Covered
54	19/11/19	Creational patterns: prototype and singleton (only) cont...	Covered
55	19/11/19	Structural patterns adaptor and proxy (only)	Covered
56	20/11/19	Question papers solvation	Covered
57	25/11/19	Question papers solvation	Covered
	26/11/19	Question papers solvation	Covered
59	27/11/19	Question papers solvation	Covered
60	30/11/19	Question papers solvation	Covered

TEXT BOOKS:

1. Michael Blaha, James Rumbaugh: Object Oriented Modelling and Design with UML, 2nd Edition, Pearson Education,2005
2. Satzinger, Jackson and Burd: Object-Oriented Analysis & Design with the Unified Process, Cengage Learning, 2005
3. Erich Gamma, Richard Helm, Ralph Johnson and john Vlissides: Design Patterns – Elements of Reusable Object-Oriented Software, Pearson Education,2007

REFERENCE BOOKS:

1. Grady Booch et. al.: Object-Oriented Analysis and Design with Applications, 3rd Edition,Pearson Education,2007.
2. Frank Buschmann, RegineMeunier, Hans Rohnert, Peter Sommerlad, Michel Stal: Pattern -Oriented Software Architecture: A system of patterns, Volume 1, JohnJWiley and Sons,2007.
3. Booch, Jacobson, Rumbaugh : Object Oriented Analysis and Design with Applications, 3rd edition, pearson, Reprint 2013

(Mr. Harish Aradhya P C)
Staff Incharge

(Prof. H R Kumar)
HOD, ISE

(Dr. T Hemalatha)
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Shridevi Institute of Engineering and Technology-Tumkur
(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-2020 (Odd Sem)

COURSE PLAN

Cover Page: Course Overview
Semester: V Semester **Year: 2019-2020**

Course : **Database Management System**	Course Code: **17CS53**
Total contact Hours: **61**	Duration of Exam: **03 Hrs.**
Total exam marks: **60**	Total I.A. marks: **40**
Lesson plan author: **Mr. Mallesh HL**	Date: **24/07/2019**
Checked by: **Prof. C V Shanmukaswamy**	Date: **24/07/2019**

COURSE OBJECTIVES:

The students will learn to

- Understand terms related to database design and management
- Understand the objectives of data and information management
- Understand the database development process
- Understand the relational model and relational database management system
- Assess data and information requirements
- Construct conceptual data models
- Evaluate the normality of a logical data model, and correct any anomalies
- Develop physical data models for relational database management systems
- Implement relational databases using a RDBMS
- Retrieve data using SQL
- Understand database performance issues
- Understand the basics of data management and administration
- Work as a valuable member of a database design and implementation team

COURSE OUTCOME:

The student should be able to

- Understand terms related to database design and management
- Understand the objectives of data and information management
- Understahd the database development process
- Understand the relational model and relational database management system
- Assess data and information requirements
- Construct conceptual data models
- Evaluate the normality of a logical data model, and correct any anomalies
- Develop physical data models for relational database management systems
- Implement relational databases using a RDBMS
- Retrieve data using SQL
- Understand database performance issues
- Understand the basics of data management and administration
- Work as a valuable member of a database design and implementation team

Shridevi Institute of Engineering and Technology-Tumkur
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Academic Year 2019-2020 (Odd Sem)

Name of the Staff: Mr. Mallesh HL | Course Code: 17CS53

Class: V SEM CSE | Course: Database Management System

Sl. No.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		Module – 1		
01	26/7/2019	**Introduction to Databases:** Introduction, Characteristics of database approach,	Covered	
02	27/7/2019	Advantages of using the DBMS approach, History of database applications	Covered	
03	29/7/2019	**Overview of Database Languages and Architectures:** Data Models, Schemas, and Instances.	Covered	
04	31/7/2019	Three schema architecture and data independence, database languages, and interfaces, The Database System environment,	Covered	
05	2/8/2019	**Conceptual Data Modelling using Entities and Relationships:** Entity types, Entity sets,	Covered	
06	3/8/2019	attributes, roles, and structural constraints, Weak entity types,	Covered	
07	5/8/2019	ER diagrams, examples, Specialization and Generalization	Covered	
		Module – 2		
08	7/8/2019	**Relational Model:** Relational Model Concepts, Relational Model Constraints and relational database schemas,	Covered	
09	9/8/2019	Update operations, transactions, and dealing with constraint violations.	Covered	
10	10/8/2019	**Relational Algebra:** Unary and Binary relational operations, additional relational operations (aggregate, grouping, etc.)	Covered	
11	14/8/2019	Examples of Queries in relational algebra.	Covered	
12	16/8/2019	**Mapping Conceptual Design into a Logical Design:** Relational Database Design using ER-to-Relational mapping.	Covered	
13	17/8/2019	**SQL:** SQL, data definition and data types, specifying constraints in SQL,	Covered	
14	19/8/2019	Retrieval queries in SQL, INSERT, DELETE, and UPDATE statements in SQL	Covered	
15	21/8/2019	Additional features of SQL.	Covered	
16	23/8/2019	Revision	Covered	
17	24/8/2019	Question Paper Discussion	Covered	
		Module – 3		
18	26/8/2019	**SQL : Advances Queries:** More complex SQL retrieval queries,	Covered	
19	28/8/2019	Specifying constraints as assertions and action triggers,	Covered	
20	30/8/2019	Views in SQL, Schema change statements in SQL.	Covered	
21	31/8/2019	**Database Application Development:** Accessing databases from applications,	Covered	
22	4/9/2019	An introduction to JDBC, JDBC classes and interfaces	Covered	
23	6/9/2019	SQLJ, Stored procedures	Covered	
24	14/9/2019	Case study: The internet Bookshop	Covered	
25	13/9/2019	**Internet Applications:** The three-tier application architecture		

26	14/9/2019	The presentation layer, The Middle Tier	Covered	
27	16/9/2019	Revision	Covered	
28	18/9/2019	Question Paper Discussion	Covered	

Module – 4

29	20/9/2019	**Normalization: Database Design Theory** – Introduction to Normalization using Functional and Multivalued Dependencies:	Covered	
30	21/9/2019	Informal design guidelines for relation schema, Functional Dependencies,	Covered	
31	23/9/2019	Normal Forms based on Primary Keys, Second and Third Normal Forms,	Covered	
32	25/9/2019	Boyce-Codd Normal Form,	Covered	
33	27/9/2019	Multivalued Dependency and Fourth Normal Form,	Covered	
34	30/9/2019	Join Dependencies and Fifth Normal Form.	Covered	
35	4/10/2019	**Normalization Algorithms:** Inference Rules, Equivalence, and Minimal Cover,	Covered	
36	5/10/2019	Properties of Relational Decompositions, Algorithms for Relational Database Schema Design,	Covered	
37	9/10/2019	Nulls, Dangling tuples, and alternate Relational Designs,	Covered	
38	11/10/2019	Further discussion of Multivalued dependencies and 4NF,	Covered	
39	12/10/2019	Other dependencies and Normal Forms	Covered	

Module – 5

40	18/10/2019	**Transaction Processing:** Introduction to Transaction Processing, Transaction and System concepts,	Covered	
41	19/10/2019	Desirable properties of Transactions, Characterizing schedules based on recoverability,	Covered	
42	21/10/2019	Characterizing schedules based on Serializability, Transaction support in SQL,	Covered	
43	23/10/2019	**Concurrency Control in Databases:** Two-phase locking techniques for Concurrency control,	Covered	
44	25/10/2019	Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques,	Covered	
45	26/10/2019	Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking,	Covered	
46	28/10/2019	**Introduction to Database Recovery Protocols:** Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update,	Covered	
47	30/10/2019	Recovery techniques based on immediate update, Shadow paging,	Covered	
48	2/11/2019	Database backup and recovery from catastrophic failures	Covered	
49	4/11/2019	Question Paper Discussion	Covered	
50	6/11/2019	Question Paper Discussion	Covered	
51	8/11/2019	Question Paper Discussion	Covered	
52	9/11/2019	Question Paper Discussion	Covered	
53	11/11/2019	Question Paper Discussion	Covered	
54	13/11/2019	Question Paper Discussion	Covered	
55	16/11/2019	Revision	Covered	
56	18/11/2019	Revision	Covered	
57	20/11/2019	Revision	Covered	
58	25/11/2019	Revision	Covered	
59	27/11/2019	Revision	Covered	
60	29/11/2019	Revision	Covered	
61	30/11/2019	Revision		

TEXT BOOKS:

1. **Database systems Model, Languages, Design and Application Programming**, RamezElmasri and Shamkant B. Navathe, 7th Edition, 2017, Pearson.

2. **Database management systems**, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.

2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design,Implementation and Management, Cengage Learning 2012.

Mr. Mallesh H.L
Staff In-charge

Prof. C V Shanmukaswamy
HOD, Dept of CSE

Dr.Narendra Viswanath
Principal

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (Odd Sem)

COURSE PLAN

Cover Page: **Course Overview**
Semester: **V Semester** **Year: 2019-20**

Course Title: **AUTOMATA THEORY AND COMPUTABILITY**	*Course Code:* **17CS54**
Total contact Hours: **66**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **100**	*Total I.A. marks:* **40**
Lesson plan author: **Ms. Kiran G M**	*Date:* **25/07/2019**
Checked by: **Prof. C.V Shanmukaswamy**	*Date:* **25/07/2019**

Objectives:

This course will enable students to:

- Introduce core concepts in Automata and Theory of Computation
- Identify different Formal language Classes and their Relationships
- Design Grammars and Recognizers for different formal languages
- Prove or disprove theorems in automata theory using their properties
- Determine the decidability and intractability of Computational problems.

Outcomes:

The student should be able to:

- Acquire fundamental understanding of the core concepts in automata theory and Theory of Computation
- Learn how to translate between different models of Computation (e.g. Deterministic and Non-deterministic and Software models)
- Design Grammars and Automata (recognizers) for different language classes and become knowledgeable about restricted models of Computation (Regular, Context Free) and their relative powers.
- Develop skills in formal reasoning and reduction of a problem to a formal model, with an emphasis on semantic precision and conciseness.
- Classify a problem with respect to different models of Computation.

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TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (Odd Sem)
COURSE PLAN

Staff: Mr. Kiran G M | **Class: V Sem**

Course: Formal Languages And Automata Theory | **Sub. Code: 17CS54**

Sl. No.	Date	Topics planned	Topics covered	Remarks
01	25/07/19	**MODULE-1: Why study the Theory of Computation. Languages and Strings**: Strings, Languages.	Covered	
02	26/07/19	A Language Hierarchy, Computation.	Covered	
03	27/07/19	**Finite State Machines (FSM)**: Deterministic FSM.	Covered	
04	29/07/19	Regular languages.	Covered	
05	30/07/19	Designing FSM, Nondeterministic FSMs.	Covered	
06	31/07/19	From FSMs to Operational Systems.	Covered	
07	01/08/19	Simulators for FSMs.	Covered	
08	10/08/19	Minimizing FSMs.	Covered	
09	11/08/19	Canonical form of Regular languages.	Covered	
10	13/08/19	Finite State Transducers.	Covered	
11	16/08/19	Bidirectional Transducers.	Covered	
12	17/08/19	**MODULE – 2** Regular Expressions (RE): what is a RE?	Covered	
13	18/08/19	Kleene's theorem.	Covered	
14	20/08/19	Applications of REs.	Covered	
15	23/08/19	Manipulating and Simplifying REs.	Covered	
16	24/08/19	Manipulating and Simplifying REs.	Covered	
17	25/08/19	Regular Grammars: Definition, Regular Grammars	Covered	
18	27/08/19	Regular Grammars	Covered	
19	29/08/19	and Regular languages.	Covered	
20	30/08/19	Regular Languages (RL) and Nonregular Languages: How many RLs.	Covered	
21	31/08/19	To show that a language is regular.	Covered	
22	01/09/19	Closure properties of RLs.	Covered	
23	03/09/19	to show some languages are not RLs.	Covered	
24	05/09/19	**MODULE – 3** Context Free Grammars(CFGs): Introduction to Rewrite Systems and Grammars.	Covered	
25	06/09/19	CFGs and languages.	Covered	
26	07/09/19	designing CFGs.	Covered	
27	08/09/19	simplifying CFGs.	Covered	
28	10/09/19	proving that a Grammar is correct.	Covered	
29	12/09/19	Derivation and Parse trees.	Covered	
30	14/09/19	Ambiguity, Normal Forms.	Covered	
31	15/09/19	Pushdown Automata (PDA): Definition of non-deterministic PDA.	Covered	
32	17/09/19	Deterministic PDA	Covered	
33	19/09/19	Non-deterministic PDAs.	Covered	
34	26/09/19	Non-determinism and Halting.	Covered	
35	27/09/19	Non-determinism and Halting.	Covered	
36	28/09/19	Alternative equivalent definitions of a PDA.	Covered	
37	29/09/19	alternatives that are not equivalent to PDA	Covered	

38	01/10/19	**Module – 4** Context-Free and Non-Context-Free Languages: Where do the Context-Free Languages(CFL) fit.	Covered
39	03/10/19	Showing a language is context-free.	Covered
40	04/10/19	Pumping theorem for CFL	Covered
41	05/10/19	Important closure properties of CFLs.	Covered
42	08/10/19	Deterministic CFLs	Covered
43	10/10/19	Deterministic CFLs contd.	Covered
44	11/10/19	Algorithms and Decision Procedures for CFLs: Decidable questions.	Covered
45	12/10/19	Un-decidable questions.	Covered
46	13/10/19	Turing Machine: Turing machine model.	Covered
47	15/10/19	Turing Machine: Turing machine model contd.	Covered
48	17/10/19	Representation.	Covered
49	20/10/19	Language acceptability by TM.	Covered
50	22/10/19	design of TM.	Covered
51	25/10/19	Techniques for TM construction.	Covered
52	26/10/19	**MODULE – 5** Variants of Turing Machines (TM).	Covered
53	27/10/19	The model of Linear Bounded automata	Covered
54	02/11/19	Decidability: Definition of an algorithm.	Covered
55	03/11/19	decidability.	Covered
56	05/11/19	decidable languages.	Covered
57	09/11/19	Undecidable languages.	Covered
58	10/11/19	halting problem of TM	Covered
59	12/11/19	Post correspondence problem	Covered
60	14/11/19	Complexity: Growth rate of functions.	Covered
61	16/11/19	the classes of P and NP.	Covered
62	17/11/19	Quantum Computation: quantum computers.	Covered
63	19/11/19	Church-Turing thesis.	Covered
64	20/11/19	Discussion of previous year question papers	Covered
65	28/11/19	Discussion of previous year question papers	Covered
66	30/11/19	Discussion of previous year question papers	Covered

Text Books:

1. Elaine Rich, Automata, Computability and Complexity, 1st Edition, Pearson Education,2012/2013
2. K L P Mishra, N Chandrasekaran , 3rd Edition, Theory of Computer Science, Phi, 2012.

Textbook 1: Ch 1,2, 3,4, 5.1 to 5.10 Textbook 1: Ch 6, 7, 8: 6.1 to 6.4, 7.1, 7.2, 8.1 to 8.4
Textbook 1: Ch 11, 12: 11.1 to 11.8, 12.1, 12.2, 12.4, 12.5, 12.6 Textbook 1: Ch 13: 13.1 to 13.5, Ch 14: 14.1, 14.2,
Textbook 2: Ch 9.1 to 9.6 Textbook 2: Ch 9.7 to 9.8, 10.1 to 10.7, 12.1, 12.2, 12.8, 12.8.1, 12.8.2

Reference Books:

1. John E Hopcroft, Rajeev Motwani, Jeffery D Ullman, Introduction to AutomataTheory, Languages, and Computation, 3rd Edition, Pearson Education, 2013.
2. Michael Sipser : Introduction to the Theory of Computation, 3rd edition, Cengage learning,2013
3. John C Martin, Introduction to Languages and The Theory of Computation, 3rd Edition, Tata McGraw Hill Publishing Company Limited, 2013
4. Peter Linz, "An Introduction to Formal Languages and Automata", 3rd Edition, Narosa Publishers, 1998
5. Basavaraj S. Anami, Karibasappa K. G, Formal Languages and Automata theory, Wiley India, 2012
6. C K Nagpal, Formal Languages and Automata Theory, Oxford University press, 2012

[Ms. Soumya G.M]
Staff Incharge

[Prof. C. V Shanmukharaju]
HOD, CSE

[Dr Narendra Vishwanath]
PRINCIPAL
SHREEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Shridevi Institute of Engineering and Technology-Tumakuru-06
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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Academic Year 2019-20(ODD Semester)

COURSE LECTURE PLAN

***Cover Page*: Course Overview**
Semester **: V** **Year: 2019-2020**

Course Title: **Dot Net Framework for Application Development**	*Subject Code:* **17CS564**
Total contact Hours: 50	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total IA marks:* 40
Lesson plan author: Prof. Chethan M S	*Date:* 25/07/2019
Checked by: Prof. C V Shanmukaswamy	*Date:* 25/07/2019

Course objectives:

This course will enable students to

- Understand the basics of introduction to the .NET framework
- Understand the concepts of programs as working with variables, operators & expressions
- Expose different ways of Creating and Managing classes in Namespaces
- Understanding parameter arrays, working with inheritance, interfaces & garbage collection and resource management.
- Describe & implementing properties to access fields, Using indexers.
- Understand basic Enumerating Collections and Operator overloading.

Course outcomes:

After studying this course, students will be able to:

Acquire knowledge of.....

- Build applications on Visual Studio .NET platform by understanding the syntax and Semantics of C#
- Demonstrate Object Oriented Programming concepts in C# programming language.
- Design custom interfaces for applications and leverage the available built-in interfaces in building complex applications.
- Illustrate the use of generics and collections in C#
- Compose queries to query in-memory data and define own operator behavior

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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remark
01	25/07/19	**MODULE-1. Introducing Microsoft Visual C# and Microsoft Visual Studio 2015:** Welcome to C#.	Covered	
02	26/07/19	Introduction to Dot net Components	Covered	
03	29/07/19	Introduction to Dot net Framework	Covered	
04	30/07/19	Working with variables.	Covered	
05	01/08/19	Working with variables.	Covered	
06	02/08/19	Operators and expressions programs	Covered	
07	05/08/19	Writing methods and applying scope	Covered	
08	06/08/19	Writing methods and applying scope with programs	Covered	
09	08/08/19	Using decision statements.	Covered	
10	09/08/19	Using compound assignment and iteration statements.	Covered	
11	13/08/19	Using compound assignment and iteration statements.	Covered	
12	16/08/19	Managing errors and exceptions	Covered	
13	19/08/19	Managing errors and exceptions with programs	Covered	
			Covered	
14	20/08/19	**MODULE-2. Understanding the C# object model:**	Covered	
15	22/08/19	Creating and Managing classes and objects.	Covered	
16	23/08/19	Creating and Managing classes and objects.	Covered	
17	26/08/19	Understanding values and references	Covered	
18	27/08/19	Understanding values type with programs	Covered	
19	29/08/19	Understanding references type	Covered	
20	30/08/19	Understanding references type with programs	Covered	
21	03/09/19	Creating value types with enumerations	Covered	
22	09/09/19	Creating value types with enumerations programs	Covered	
23	12/09/19	Creating value types with structures	Covered	
24	13/09/19	Creating value types with structures programs	Covered	
25	16/09/19	Using arrays with example programs	Covered	
26	17/09/19	Using arrays with example programs	Covered	
			Covered	
27	19/09/19	**MODULE-3.** Understanding parameter arrays.	Covered	
28	20/09/19	Understanding parameter arrays.	Covered	
29	23/09/19	Programs of arrays	Covered	
30	24/09/19	Working with inheritance concepts	Covered	
31	26/09/19	Working with inheritance basic programs	Covered	
32	27/09/19	Working with inheritance programs	Covered	
33	30/09/19	Creating interfaces and defining abstract classes.	Covered	
34	01/10/19	Creating interfaces and defining abstract classes.	Covered	
35	03/10/19	Using garbage collection and resource management	Covered	
36	04/10/19	Using garbage collection and resource management	Covered	
37	10/10/19	Using garbage collection and resource management	Covered	

38	11/10/19	**MODULE-4, Defining Extensible Types with C#:**	
39	17/10/19	Extensible Types with C#	
40	18/10/19	Implementing properties to access fields.	
41	21/10/19	Implementing properties to access fields.	
42	22/10/19	Using indexers.	
43	24/10/19	Using indexers.	
44	25/10/19	Introducing generics	
45	28/10/19	Introducing generics	
46	31/10/19	Using collections	
47	04/11/19	Using collections	
48	05/11/19	Using collections	
49	07/11/19	**MODULE-5,** Enumerating Collections	
50	08/11/19	Enumerating Collections	
51	11/11/19	Decoupling application logic and handling events	
52	12/11/19	Decoupling application logic and handling events	
53	14/11/19	Querying in-memory data by using query expressions	
54	18/11/19	Querying in-memory data by using query expressions	
55	19/11/19	Operator overloading	
56	25/11/19	Operator overloading	
57	26/11/19	**Revision of Module 1 & 2**	
58	28/11/19	**Revision of Module 3 &4**	
59	29/11/19	**Revision of Module 5**	

Text Books:

1. John Sharp, Microsoft Visual C# Step by Step, 8th Edition, PHI Learning Pvt. Ltd, 2016

Reference Books:

1. Christian Nagel, "C# 6 and .NET Core 1.0", 1st Edition, Wiley India Pvt Ltd, 2016. Andrew Stellman and Jennifer Greene, "Head First C#", 3rd Edition, O'Reilly Publications, 2013.
2. Mark Michaelis, "Essential C# 6.0", 5th Edition, Pearson Education India, 2016.
3. Andrew Troelsen, "Prof C# 5.0 and the .NET 4.5 Framework", 6th Edition, Apress and Dreamtech Press, 2012.

Prof. Chethan M S
Staff Incharge

Prof. Kumar H R
Head, Dept of ISE

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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

COURSE LECTURE PLAN

Cover Page: **Course Overview**
Semester : V

Year: 2019-2020

Course Title: **Dot Net Framework for Application Development**	*Subject Code*: **17CS564**
Total contact Hours: 59	*Duration of Exam*: 03 Hrs.
Total exam marks: 60	*Total I.A. marks*: 40
Lesson plan author: Prof. Chethan M S	*Date*: 25/07/2019
Checked by: Prof. C V Shanmukaswamy	*Date*: 25/07/2019

Course objectives:

This course will enable students to

- Understand the basics of Introduction to the .NET framework.
- Understand the concepts of programs as working with variables, operators & expressions.
- Expose different ways of Creating and Managing classes in Namespaces
- Understanding parameter arrays, working with inheritance, interfaces & garbage collection and resource management.
- Describe & implementing properties to access fields, Using indexers.
- Understand basic Enumerating Collections and Operator overloading.

Course outcomes:

After studying this course, students will be able to:

Acquire knowledge of.....

- Build applications on Visual Studio .NET platform by understanding the syntax and Semantics of C#
- Demonstrate Object Oriented Programming concepts in C# programming language.
- Design custom interfaces for applications and leverage the available built-in interfaces in building complex applications.
- Illustrate the use of generics and collections in C#
- Compose queries to query in-memory data and define own operator behavior

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	25/07/19	**MODULE-1. Introducing Microsoft Visual C# and Microsoft Visual Studio 2015:** Welcome to C#.	Covered	
02	26/07/19	Introduction to Dot net Components	Covered	
03	29/07/19	Introduction to Dot net Framework	Covered	
04	30/07/19	Working with variables,	Covered	
05	01/08/19	Working with variables.	Covered	
06	02/08/19	Operators and expressions programs	Covered	
07	05/08/19	Writing methods and applying scope	Covered	
08	06/08/19	Writing methods and applying scope with programs	Covered	
09	08/08/19	Using decision statements,	Covered	
10	09/08/19	Using compound assignment and iteration statements.	Covered	
11	13/08/19	Using compound assignment and iteration statements.	Covered	
12	16/08/19	Managing errors and exceptions	Covered	
13	19/08/19	Managing errors and exceptions with programs	Covered	
			Covered	
14	20/08/19	**MODULE-2. Understanding the C# object model:**	Covered	
15	22/08/19	Creating and Managing classes and objects.	Covered	
16	23/08/19	Creating and Managing classes and objects.	Covered	
17	26/08/19	Understanding values and references	Covered	
18	27/08/19	Understanding values type with programs	Covered	
19	29/08/19	Understanding references type	Covered	
20	30/08/19	Understanding references type with programs	Covered	
21	03/09/19	Creating value types with enumerations	Covered	
22	09/09/19	Creating value types with enumerations programs	Covered	
23	12/09/19	Creating value types with structures	Covered	
24	13/09/19	Creating value types with structures programs	Covered	
25	16/09/19	Using arrays with example programs	Covered	
26	17/09/19	Using arrays with example programs	Covered	
			Covered	
27	19/09/19	**MODULE-3.** Understanding parameter arrays.	Covered	
28	20/09/19	Understanding parameter arrays.	Covered	
29	23/09/19	Programs of arrays	Covered	
30	24/09/19	Working with inheritance concepts	Covered	
31	26/09/19	Working with inheritance basic programs	Covered	
32	27/09/19	Working with inheritance programs	Covered	
33	30/09/19	Creating interfaces and defining abstract classes.	Covered	
34	01/10/19	Creating interfaces and defining abstract classes.	Covered	
35	03/10/19	Using garbage collection and resource management	Covered	
36	04/10/19	Using garbage collection and resource management	Covered	
37	10/10/19	Using garbage collection and resource management	Covered	

	11/10/19	**MODULE-4. Defining Extensible Types with C#:**	
39	17/10/19	Extensible Types with C#	
40	18/10/19	Implementing properties to access fields.	
41	21/10/19	Implementing properties to access fields.	
42	22/10/19	Using indexers.	
43	24/10/19	Using indexers.	
44	25/10/19	Introducing generics	
45	28/10/19	Introducing generics	
46	31/10/19	Using collections	
47	04/11/19	Using collections	
48	05/11/19	Using collections	
49	07/11/19	**MODULE-5.** Enumerating Collections	
50	08/11/19	Enumerating Collections	
51	11/11/19	Decoupling application logic and handling events	
52	12/11/19	Decoupling application logic and handling events	
53	14/11/19	Querying in-memory data by using query expressions	
54	18/11/19	Querying in-memory data by using query expressions	
55	19/11/19	Operator overloading	
56	25/11/19	Operator overloading	
57	26/11/19	**Revision of Module 1 & 2**	
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59	29/11/19	**Revision of Module 5**	

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Prof. Chethan M S
Staff Incharge

Pro[illegible] Shanmukhaswamy
Head, Dept of CSE

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20

PRACTICAL SESSION PLAN

Staff: Mr. Renukaradhya P C & Mr Suthan R — Class: V – A2(Tuesday)
Course: DBMS LABORATORY WITH MINI PROJECT — Code: 17CSL58

Sl. No	Date	TOPIC	Remarks
1.	30/07/19	Demo on Simple SQL Queries , Practice on SQL Queries	
2.	06/08/19	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	
3	13/08/19	**Execution of Experiment-1**	
4.	20/08/19	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	
5.	27/08/19	**Execution of Experiment-2**	
6.	03/09/19	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Star) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least	

		one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.
7.	10/09/19	**Execution of Experiment-3**
8.	17/09/19	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.
9.	24/09/19	**Execution of Experiment-4**
10.	1/10/19	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.
11.	08/10/19	**Execution of Experiment -5**
12.	22/10/19	**Internals – II & Project work**
13.	29/10/19	**Project work**
14.	19/11/19	**Revision ;Project work**
15.	26/11/19	**Internals III and evaluation of project work**

[Mr. Renukaradhya P C & Mr.Suthan R]
Staff-Incharge

[Prof .C.V Shanmgkaswamy]
HOD, Dept of CSE

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20

PRACTICAL SESSION PLAN

Staff: Mr. Renukaradhya P C & Mr Suthan R — Class: V – A[Friday]
Course: DBMS LABORATORY WITH MINI PROJECT — Code: 17CSL58

Sl. No	Date	TOPIC	Remarks
1.	26/07/19	**Demo on Simple SQL Queries , Practice on SQL Qubries**	
2.	02/08/19	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	
3	09/08/19	**Execution of Experiment-1**	
4.	16/08/19	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	
5.	23/08/19	**Execution of Experiment-2**	
6.	30/08/19	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find	

		the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.
7.	13/09/19	**Execution of Experigent-3**
8.	20/09/19	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.
9.	27/09/19	**Execution of Experiment-4**
10.	04/10/19	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department. 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.
11.	11/10/19	**Execution of Experiment -5**
12.	25/10/19	**Internals-II and Project work**
13.	01/11/19	**Project work**
14.	15/11/19	**Revision :Project work**
15.	29/11/19	**Internals III and evaluation of project work**

[Mr. Renukaradhya P C & Mr Suthan R]
Staff-Incharge

[Prof .C.V Shanmukaraya
HOD, Dept of CSE

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BIET, DAVANGERE

Shridevi Institute of Engineering and Technology, Tumkur
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Semester: VII **Year: 2019-2020**

Subject Title: WEB TECHNOLOGY AND ITS APPLICATIONS	Subject Code: 15CS71
Total contact Hours: 60	Duration of Exam: 03 Hrs
Total exam marks: 60	Total I.A. marks: 40
Course plan author: Mr Renukamurthy P V	Date: 24/07/2019
Checked by: Prof. C V Shanmuka Swamy	Date: 25/07/2019

OBJECTIVES

- To understand the technologies and protocols underlying the World Wide Web(WWW)
- To become familiar with common tools and techniques for developing Web-based applications, both client-side and server-side
- To develop a working knowledge of HTML, XHTML,JavaScript,Java,Perl and PHP as languages for developing Web applications
- To know the use of Cascading Style sheet in creating document server-Browser communications.
- To understand XML concepts, CGI concepts, and Perl.

OUTCOMES

- Define HTML and CSS syntax and semantics to build web pages.
- Understand the concepts of Construct , visually format tables and forms using HTML using CSS
- Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.
- List the principles of object oriented development using PHP
- Illustrate JavaScript frameworks like jQuery and Backbone which facilitates

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Sl. No	DATE	TOPIC NAMES	TOPICS COVERED	REMARKS
1	29-07-19	**Module-1:** Introduction to HTML, What is HTML and Where did it come from?	Covered	
2	30-07-19	HTML Syntax, Semantic Markup, Structure of HTML Documents	Covered	
3	01-08-19	Quick Tour of HTML Elements	Covered	
4	03-08-19	HTML 5 Semantic Structure Elements	Covered	
5	05-08-19	Introduction to CSS.	Covered	
6	07-08-19	What is CSS, CSS Syntax	Covered	
7	08-08-19	Location of Styles,	Covered	
8	10-08-19	Selectors	Covered	
9	14-08-19	The Cascade: How Styles Interact	Covered	
10	17-08-19	The Box Model	Covered	
11	19-08-19	CSS Text Styling	Covered	
			Covered	
12	21-08-19	**Module – 2:** HTML Tables	Covered	
13	22-08-19	Forms, Introducing Tables	Covered	
14	24-08-19	Styling Tables	Covered	
15	26-08-19	Introducing Forms, Form Control Elements, Table and Form Accessibility	Covered	
16	28-08-19	Microformats	Covered	
17	29-08-19	Advanced CSS: Layout, Normal Flow	Covered	
18	31-08-19	Positioning Elements, Floating Elements	Covered	
19	02-09-19	Constructing Multicolumn Layouts	Covered	
20	09-09-19	Approaches to CSS Layout	Covered	
21	11-09-19	Responsive Design	Covered	
22	17-09-19	CSS Frameworks	Covered	
			Covered	
23	18-09-19	**Module – 3:** JavaScript: Client-Side Scripting	Covered	

24	16.09.19	What is JavaScript and What can it do?	Covered
25	18.09.19	JavaScript Design Principles, Where does JavaScript Go?,	Covered
26	19.09.19	Syntax, JavaScript Objects	Covered
27	21.09.19	The Document Object Model (DOM), JavaScript Events Forms	Covered
28	23.09.19	Introduction to Server-Side Development with PHP	Covered
29	25.09.19	What is Server-Side Development	Covered
30	26.09.19	A Web Server's Responsibilities	Covered
31		Quick Tour of PHP	Covered
32	28.09.19	Program Control	Covered
33	30.09.19	Functions	Covered
			Covered
34	02.10.19	**Module – 4:** PHP Arrays and Superglobals	Covered
35	03.10.19	Arrays, $_GET and $_POST Superglobal Arrays	Covered
36	05.10.19	$_SERVER Array, $_Files Array	Covered
37	09.10.19	Reading/Writing Files, PHP 5 Classes and Objects	Covered
38	10.10.19	Object-Oriented Overview	Covered
39	12.10.19	Classes and Objects in PHP	Covered
40	17.10.19	Object Oriented Design	Covered
41	19.10.19	Error Handling and Validation	Covered
42	21.09.19	What are Errors and Exceptions?,	Covered
43	23.10.19	PHP Error Reporting	Covered
44	24.10.19	PHP Error and Exception Handling	Covered
			Covered
45	07.10.19	**Module – 5** Managing State, The Problem of State in Web Applications	Covered
46	04.10.19	Passing Information via Query String	Covered
47	06.10.19	Passing Information via the URL Path, Cookies, Serialization	Covered
48	07.10.19	Session State, HTML5 Web Storage	Covered
49	09.11.19	Caching, Advanced JavaScript and jQuery	Covered
50	11.11.19	JavaScript Pseudo-Classes, jQuery Emulation	Covered
51	13.11.19	AJAX, Asynchronous File Transmission	Covered
52	14.11.19	Animation,	Covered
53	16.11.19	Backbone MVC Framework	Covered
54	18.11.19	XML Processing and Web Services	Covered

55	20.12.19	XML Processing, JSON	Covered
56	24.12.19	Overview of Web Services	Covered
57	26.12.19	Question paper discussion	Covered
58	27.12.19	Question paper discussion	Covered
59	28.12.19	Question paper discussion	Covered
60	30.12.19	Question paper discussion	Covered

[Mr Ramakaradhya P C]
Staff Incharge

[Prof. Shashidhara Acharya]
HOD, CSE

[Dr. T Hemadri Naidu]
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE PLAN

Semester: VII Year: 2019-2020

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Total exam marks: 60	Total IA marks: 40
Course plan author: Mr Ramakanth [illegible]	Date: 24/07/2019
Checked by: Prof. H R Kanna	Date: 25/07/2019

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32	28.09.19	Program Control	Covered
33	30.09.19	Functions	Covered
			Covered
34	02.10.19	**Module – 4:** PHP Arrays and Superglobals	Covered
35	03.10.19	Arrays, $_GET and $_POST Superglobal Arrays	Covered
36	05.10.19	$_SERVER Array, $_Files Array	Covered
37	09.10.19	Reading/Writing Files, PHP Classes and Objects	Covered
38	10.10.19	Object-Oriented Overview	Covered
39	12.10.19	Classes and Objects in PHP	Covered
40	17.10.19	Object Oriented Design	Covered
41	19.10.19	Error Handling and Validation	Covered
42	21.10.19	What are Errors and Exceptions?	Covered
43	23.10.19	PHP Error Reporting	Covered
44	24.10.19	PHP Error and Exception Handling	Covered
			Covered
45	07.10.19	**Module – 5** Managing State: The Problem of State in Web Applications	Covered
46	01.10.19	Passing Information via Query String	Covered
47	06.10.19	Passing Information via the URL Path, Cookies, Serialization	Covered
48	07.10.19	Session State, HTML5 Web Storage	Covered
49	09.11.19	Caching, Advanced JavaScript and jQuery	Covered
50	11.11.19	JavaScript Pseudo-Classes, jQuery Foundations	Covered
51	13.11.19	AJAX, Asynchronous File Transmission	Covered
52	14.11.19	Animation	Covered
53	16.11.19	Backbone MVC Framework	Covered
54	18.11.19	XML Processing and Web Services	Covered

55	20-12-19	XML Processing, JSON.	Covered
56	21-12-19	Overview of Web Services	Covered
57	25-12-19	Question paper discussion	Covered
58	27-12-19	Question paper discussion	Covered
59	28-12-19	Question paper discussion	Covered
60	30-12-19	Question paper discussion	Covered

(Mr Renukaradhya P C)
Staff Incharge

(Prof. H R Kumar)
HOD, ISE

(Dr. T Hemadri Naidu)
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

Sri Shridevi Charitable Trust (R)
SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY
Sira Road, Tumkur – 572 106, Karnataka.
DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2019 - 2020/ WEF: 29/07/2019

Academic Year 2019-2020 (ODD Sem)

LECTURE PLAN

Cover Page: **Course Overview**
Semester: VII Semester **Year: 2019-2020**

Course Title: **Advanced Computer Architectures**	*Course Code:* **15CS72**
Total contact Hours: **57**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Mr.Mallesh H L**	*Date:* **27/07/2019**
Checked by: **Prof. C V Shanmuka Swamy**	*Date:* **27/07/2019**

Course objectives: This course will enable students to

- Describe computer architecture.
- Measure the performance of architectures in terms of right parameters.
- Summarize parallel architecture and the software used for them

Course outcomes: The students should be able to:

- Explain the concepts of parallel computing and hardware technologies
- Compare and contrast the parallel architectures
- Illustrate parallel programming concepts

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Sira Road, Tumkur – 572 106. Karnataka.

DEPARTMENT OF COMPUTER SCIENCE AND ENGG.

SIET / CSE / 2019 - 2020/

WEF: 29/07/2019

Staff: Mr.Mallesh H L

Class: VII Sem

Course Name : Advanced Computer Architectures

Course Code: 15CS72

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
		MODULE I Theory of Parallelism		
01	29/7/2019	Parallel Computer Models	Covered	
02	30/7/2019	The State of Computing,Multiprocessors and Multicomputer	Covered	
03	1/8/2019	Multivector and SIMD Computers ,PRAM and VLSI Model	Covered	
04	2/8/2019	Program and Network Properties ,Conditions of Parallelism	Covered	
05	5/8/2019	Program Partitioning and Scheduling, Program Flow Mechanisms	Covered	
06	6/8/2019	System Interconnect Architectures, Principles of Scalable Performance	Covered	
07	8/8/2019	Performance Metrics and Measures	Covered	
08	9/8/2019	Parallel Processing Applications	Covered	
09	11/8/2019	Speedup Performance Laws	Covered	
10	16/8/2019	Scalability Analysis and Approaches	Covered	
		MODULE II Hardware Technologies		
11	19/8/2019	Processors and Memory Hierarchy	Covered	
12	20/8/2019	Processors and Memory Hierarchy Contd.	Covered	
13	22/8/2019	Advanced Processor Technology	Covered	
14	23/8/2019	Advanced Processor Technology Contd.,	Covered	
15	26/8/2019	Superscalar and Vector Processors	Covered	
16	27/8/2019	Superscalar and Vector Processors Contd.,	Covered	
17	29/8/2019	Memory Hierarchy Technology	Covered	
18	30/8/2019	Memory Hierarchy Technology Contd.,	Covered	
19	3/9/2019	Virtual Memory Technology	Covered	
20	9/9/2019	Virtual Memory Technology Contd.,	Covered	
		MODULE II Hardware Technologies		
21	12/9/2019	Bus, Cache, and Shared Memory	Covered	
22	13/9/2019	Bus Systems ,Cache Memory Organizations	Covered	
23	16/9/2019	Shared Memory Organizations	Covered	
24	17/9/2019	Sequential and Weak Consistency Models	Covered	
25	18/9/2019	Pipelining and Superscalar Techniques	Covered	
26	20/9/2019	Pipelining and Superscalar Techniques Contd.,	Covered	
27	23/9/2019	Linear Pipeline Processors	Covered	
28	24/9/2019	Nonlinear Pipeline Processors	Covered	
29	26/9/2019	Instruction Pipeline Design	Covered	
30	27/9/2019	Arithmetic Pipeline Design	Covered	

MODULE IV Parallel and Scalable Architectures			
31	30/9/2019	Multiprocessors and Multicomputers Multiprocessor System Interconnects	Covered
32	1/10/2019	Cache Coherence and Synchronization Mechanisms	Covered
33	3/10/2019	Three Generations of Multicomputers ,Message-Passing	Covered
34	4/10/2019	Mechanisms ,Multivector and SIMD Computers	Covered
35	40/10/2019	Vector Processing Principles Multivector Multiprocessors	Covered
36	11/10/2019	Compound Vector Processing	Covered
37	17/10/2019	SIMD ComputerOrganizations Scalable	Covered
38	18/10/2019	Multithreaded, and Dataflow Architectures, Latency-Hiding Techniques	Covered
39	21/10/2019	Principles of Multithreading, Fine-Grain Multicomputers,	Covered
40	22/10/2019	Scalable and Multithreaded Architectures, Dataflow and Hybrid Architectures	Covered
MODULE V Software for parallel programming:			
41	24/10/2019	Parallel Models, Languages, and Compilers,Parallel Programming Models, Parallel Languages and Compilers ,	Covered
42	25/10/2019	Dependence Analysis of Data Arrays ,Parallel Program Development and Environments	Covered
43	28/10/2019	Synchronization and Multiprocessing Modes, Instruction and System Level Parallelism,	Covered
44	31/10/2019	Instruction Level Parallelism ,Computer Architecture ,Contents	Covered
45	4/11/2019	Basic Design Issues ,Problem Definition ,Model of a Typical Processor	Covered
46	5/11/2019	Compiler-detected Instruction Level Parallelism	Covered
47	7/11/2019	Operand Forwarding ,Reorder Buffer, Register Renaming ,	Covered
48	8/11/2019	Tomasulo's Algorithm ,Branch Prediction,	Covered
49	11/11/2019	Limitations in Exploiting Instruction Level Parallelism	Covered
50	12/11/2019	Thread Level Parallelism.	Covered
51	14/11/2019	Revision	Covered
52	18/11/2019	Question paper Discussion	Covered
53	19/11/2019	Question paper Discussion	Covered
54	25/11/2019	Question paper Discussion	Covered
55	26/11/2019	Question paper Discussion	Covered
56	28/11/2019	Question paper Discussion	Covered
57	29/11/2019	Question paper Discussion	Covered

Text Books:

1. Kai Hwang and Naresh Jotwani, Advanced Computer Architecture (SIE): Parallelism, Scalability, Programmability, McGraw Hill Education 3/e. 2015

Reference Books:

1. John L. Hennessy and David A. Patterson, Computer Architecture: A quantitative approach, 5th edition, Morgan Kaufmann Elsevier, 2013

[Mr.Mahesh H L]
Staff In charge

[Prof. C. V Shanmuka Swamy]
HOD, CSE

[Dr.Narender Viswanath]
Principal

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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE PLAN

***Cover Page*: Course Overview**
Semester: VII Semester

Year: 2019-20

Course Title: **MACHINE LEARNING**	*Course Code:* **15CS73**
Total contact Hours: **56**	*Duration of Exam:* **03 Hrs.**
Total exam marks: **80**	*Total I.A. marks:* **20**
Lesson plan author: **Prof.C.V. Shanmuka swamy**	*Date:* **26 /07/2019**
Checked by: **Prof.Kumar H.R.**	*Date:* **26 /07/2019**

Objectives:

This course will enable students to:

- Define machine learning and problems relevant to machine learning.
- Differentiate supervised, unsupervised and reinforcement learning
- Apply neural networks, Bayes classifier and k nearest neighbor, for problems appear in machine learning.
- Perform statistical analysis of machine learning techniques.

Outcomes:

After studying this course, student should be able to:

- Identify the problems for machine learning. And select the either supervised, unsuperavised or reinforcement learning.
- Explain theory of probability and statistics related to machine learning
- Investigate concept learning, ANN, Bayes classifier, k nearest neighbor, Q.

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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE PLAN

Staff: Prof.C.VShanmuka swamy **Class: VII Sem**
Course: Machine Learning **Sub. Code: 15CS73**

SL. NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
01	29/07/2019	**MODULE-1: 10 Hours** **Introduction:** Well posed learning problems,	Covered	
02	31/07/2019	Designing a Learning system,	Covered	
03	02/08/2019	Designing a Learning system continued.	Covered	
04	03/08/2019	Perspective and Issues in Machine Learning.	Covered	
05	05/08/2019	**Concept Learning:** Concept learning task,	Covered	
06	07/08/2019	Concept learning as search,	Covered	
07	09/08/2019	Find-S algorithm,	Covered	
08	10/08/2019	Version space, Candidate Elimination algorithm,	Covered	
09	14/08/2019	Candidate Elimination algorithm continued.	Covered	
10	16/08/2019	Inductive Bias.	Covered	
11	17/08/2019	Revision	Covered	
12	19/08/2019	**MODULE – 2 10 Hours** **Decision Tree Learning:** Decision tree representation,	Covered	
13	21/08/2019	Appropriate problems for decision tree learning,	Covered	
14	23/08/2019	Basic decision tree learning algorithm,	Covered	
15	24/08/2019	ID3 algorithm,	Covered	
16	26/08/2019	Entropy, Information Gain	Covered	
17	28/08/2019	hypothesis space search in decision tree learning,	Covered	
18	30/08/2019	hypothesis space search in decision tree learning continued	Covered	
19	31/08/2019	Inductive bias in decision tree learning,	Covered	
20	04/09/2019	Issues in decision tree learning	Covered	
21	09/09/2019	Issues in decision tree learning continued-pruning	Covered	
22	11/09/2019	Revision	Covered	
23	13/09/2019	**MODULE – 3 08 Hours** **Artificial Neural Networks:** Introduction,	Covered	
24	14/09/2019	Neural Network representation,	Covered	
25	16/09/2019	Appropriate problems,	Covered	
26	18/09/2019	Perceptrons,	Covered	
27	23/09/2019	Perceptrons continued.	Covered	
28	25/09/2019	Perceptrons continued.	Covered	
29	27/09/2019	Backpropagation algorithm.	Covered	
30	30/09/2019	Backpropagation algorithm continued.	Covered	
31	04/10/2019	Revision	Covered	
32	05/10/2019	**Module – 4 10 Hours** **Bayesian Learning:** Introduction,	Covered	
33	09/10/2019	Bayes theorem,	Covered	

34	11/10/2019	Bayes theorem and concept learning.	Covered
35	12/10/2019	ML and LS error hypothesis,	Covered
36	18/10/2019	ML for predicting probabilities,	Covered
37	19/10/2019	MDL principle,	Covered
38	21/10/2019	Naive Bayes classifier,	Covered
39	23/10/2019	Bayesian belief networks,	Covered
40	25/10/2019	EM algorithm	Covered
41	26/10/2019	EM algorithm continued.	Covered
42	28/10/2019	Revision	
43	30/10/2019	**MODULE – 5** **10 Hours** **Evaluating Hypothesis:** Motivation, Estimating hypothesis accuracy,	Covered
44	02/11/2019	Basics of sampling theorem,	Covered
45	04/11/2019	General approach for deriving confidence intervals,	Covered
46	06/11/2019	Difference in error of two hypothesis,	Covered
47	08/11/2019	Comparing learning algorithms.	Covered
48	09/11/2019	**Instance Based Learning:** Introduction, k-nearest neighbor learning,	Covered
49	11/11/2019	Locally weighted regression,	Covered
50	13/11/2019	radial basis function,	Covered
51	18/11/2019	cased-based reasoning,	Covered
52	20/11/2019	**Reinforcement Learning:** Introduction,	Covered
53	25/11/2019	Learning Task, Q Learning	Covered
54	27/11/2019	Revision	Covered
55	29/11/2019	Revision	Covered
56	30/11/2019	Revision	

Text Books:

1. Tom M. Mitchell, Machine Learning, India Edition 2013, McGraw Hill Education.

Text Book1, Sections: 1.1 – 1.3, 2.1-2.5, 2.7
Text Book1, Sections: 3.1-3.7
Text book 1, Sections: 4.1 – 4.6
Text book 1, Sections: 6.1 – 6.6, 6.9, 6.11, 6.12
Text book 1, Sections: 5.1-5.6, 8.1-8.5, 13.1-13.3

Reference Books:

1. Trevor Hastie, Robert Tibshirani, Jerome Friedman, h The Elements of Statistical Learning, 2nd edition, springer series in statistics.
2. Ethem Alpaydin, Introduction to machine learning, second edition, MIT press.

[Prof.C.VShanmuka swamy]
Staff In charge

11/19
[Prof.Kumar H.R.]
HOD, ISE

26/11/19
[Dr. T Hemadri Naidu]
PRINCIPAL
BHIRDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2019-20(ODD Semester)

COURSE LECTURE PLAN

Cover Page: **Course Overview**
Semester : **VII** **Year: 2019-2020**

Course Title: UNIX SYSTEM PROGRAMMING	*Subject Code:* 15CS744
Total contact Hours: 62	*Duration of Exam:* 03 Hrs.
Total exam marks: 80	*Total I.A. marks:* 20
Lesson plan author: Mr. Basavesha D	*Date:* 01/08/2019
Checked by: Prof. C V Shanmukaswamy	*Date:* 01/08/2019

Course objectives:
This course will enable students to

- Explain the fundamental design of the unix operating system
- Familiarize with the systems calls provided in the unix environment
- Design and build an application/service over the unix operating system

Course outcomes:
After studying this course, students will be able to:

- Ability to understand and reason out the working of Unix Systems
- Build an application/service over a Unix system.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	29/07/19	**MODULE-1. Introduction** -: UNIX and ANSI Standards	Covered	
02	31/07/19	The ANSI C Standard,	Covered	
03	01/08/19	The ANSI/ISO C++ Standards,	Covered	
04	02/08/19	The POSIX Standards,	Covered	
05	05/08/19	The POSIX.1 FIPS Standard,	Covered	
06	07/08/19	The X/Open Standards,	Covered	
07	08/08/19	UNIX and POSIX APIs:	Covered	
08	09/08/19	The POSIX APIs,	Covered	
09	12/08/19	The UNIX and POSIX Development Environment,	Covered	
10	14/08/19	The UNIX and POSIX Development Environment cont...	Covered	
11	16/08/19	API Common Characteristics	Covered	
12	19/08/19	API Common Characteristics cont...	Covered	
13	21/08/19	**MODULE-2.** UNIX Files and APIs: File Types,	Covered	
14	22/08/19	The UNIX and POSIX File System,	Covered	
15	23/08/19	The UNIX and POSIX File Attributes,	Covered	
16	26/08/19	Inodes in UNIX System V,	Covered	
17	28/08/19	Application Program Interface to Files,	Covered	
18	29/08/19	UNIX Kernel Support for Files,	Covered	
19	30/08/19	Relationship of C Stream Pointers and File Descriptors,	Covered	
20	04/09/19	Directory Files, Hard and Symbolic Links.	Covered	
21	06/09/19	UNIX File APIs: General File APIs,	Covered	
22	11/09/19	File and Record Locking,	Covered	
23	12/09/19	Directory File APIs, Device File APIs,	Covered	
24	13/09/19	FIFO File APIs, Symbolic Link File APIs.	Covered	
			to	
25	16/09/19	**MODULE-3.** UNIX Processes and Process Control: The Environment of a UNIX Process: Introduction	Covered	
26	18/09/19	main function, Process Termination, Command-Line Arguments,	Covered	
27	19/09/19	Environment List, Memory Layout of a C Program, Shared Libraries,	Covered	
28	20/09/19	Memory Allocation, Environment Variables, setjmp and longjmp Functions,	Covered	
29	23/09/19	getrlimit, setrlimit Functions, UNIX Kernel Support for Processes.	Covered	
30	25/09/16	Process Control: Introduction, Process Identifiers, fork, vfork, exit,	Covered	
31	26/09/19	Process Control:Introduction, Process Identifiers, fork, vfork, exit,	Covered	
32	27/09/19	Changing User IDs and Group IDs, Interpreter Files, system Function, Process Accounting,	Covered	
33	30/09/19	User Identification, Process Times, I/O Redirection. Process Relationships: Introduction,	Covered	
34	03/10/19	Terminal Logins, Network Logins, Process Groups, Sessions, Controlling Terminal,	Covered	
35	04/10/19	tcgetpgrp and tcsetpgrp Functions, Job Control,	Covered	

36	07/10/19	Shell Execution of Programs,Orphaned Process Groups.	
37	09/10/19	**MODULE-4.** Signals and Daemon Processes: Signals:	
38	10/10/19	The UNIX Kernel Support for Signals,	
39	11/10/19	The UNIX Kernel Support for Signals cont….	
40	17/10/19	signal, Signal Mask, sigaction,	
41	18/10/19	The SIGCHLD Signal and the waitpid Function,	
42	24/10/19	The SIGCHLD Signal and the waitpid Function cont….	
43	23/10/19	The sigsetjmp and siglongjmp Functions	
44	24/10/19	Kill, Alarm, Interval Timers,	
45	25/10/19	POSIX.1b Timers.	
46	28/10/19	Daemon Processes: Introduction,	
47	30/10/19	Daemon Characteristics, Coding Rules,	
48	31/10/19	Error Logging, Client-Server Model.	
49	01/11/19	**MODULE-5.** Interprocess Communication : Overview of IPC Methods,	
50	04/11/19	Interprocess Communication : Overview of IPC Methods cont…	
51	06/11/19	Pipes, popen, pclose Functions,	
52	07/11/19	Pipes, popen, pclose Functions cont…	
53	08/11/19	Coprocesses, FIFOs,	
54	11/11/19	System V IPC, Message Queues,	
55	13/11/19	Semaphores.	
56	14/11/19	Shared Memory, Client-Server Properties,	
57	18/11/19	Stream Pipes, Passing File Descriptors,	
58	20/11/19	An Open Server-Version 1,	
59	25/11/19	Client-Server Connection Fuhctions.	
60	27/11/19	Client-Server Connection Functions cont…	
61	28/11/19	Revision, Question Paper Discussion	
62	29/11/19	Revision, Question Paper Discussion	

Text Books:

1. Unix System Programming Using C++ - Terrence Chan, PHI, 1999.
2. Advanced Programming in the UNIX Environment - W.Richard Stevens, Stephen A. Rago, 3nd Edition, Pearson Education / PHI, 2005.

Reference Books:

1. Advanced Unix Programming- Marc J. Rochkind, 2nd Edition, Pearson Education, 2005.
2. The Design of the UNIX Operating System - Maurice.J.Bach, Pearson Education / PHI, 1987.
3. Unix Internals - Uresh Vahalia, Pearson Education, 2001.

[Mr. Basavesha D]	[Prof. C V Shanmukaswamy]	[Dr. Hemadri Naidu T]
Staff Incharge	Head, Dept of CSE	Principal

PRINCIPAL
SHREE INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN

Cover Page: **Subject Overview**
Semester: VII Semester **Year:2019-20**

Subject Title: **STORAGE AREA NETWORKS**	*Subject Code:* **15CS754**
Total contact Hours: 54	*Duration of Exam:* 03 Hrs.
Total exam marks: 080	*Total I.A. marks:* 20
Lesson plan author: Mr.Suthan R	*Date:27/07/2019*
Checked by: Prof. C.V.Shanmuka Swamy	*Date:* 27/07/2019

Prerequisites: None

Objectives:
The students will learn

- Evaluate storage architectures,
- Define backup, recovery, disaster recovery, business continuity, and replication
- Examine emerging technologies including IP-SAN
- Understand logical and physical components of a storage infrastructure
- Identify components of managing and monitoring the data center
- Define information security and identify different storage virtualization technologies

Outcomes:

The students should be able to:

- Identify key challenges in managing information and analyze different storage networking technologies and virtualization
- Explain components and the implementation of NAS
- Describe CAS architecture and types of archives and forms of virtualization
- Illustrate the storage infrastructure and management activities

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DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Academic Year 2019-20 (odd Sem)
COURSE PLAN

Staff : Mr.Suthan R
Subject : **STORAGE AREA NETWORKS**

Class :VII
Sub.Code : **15CS754**

Sl. No.	DATE	TOPICS	TOPICS COVERED	REMARKS
1	31/07/19	**Module – 1 :Storage System** Introduction to evolution of storage architecture	Covered	
2	01/08/19	key data center elements, virtualization, and cloud computing	Covered	
3	02/08/19	Key data center elements – Host (or compute), connectivity	Covered	
4	03/08/19	Storage, and application in both classic and virtual environments	Covered	
5	07/08/19	RAID implementations, techniques, and levels along with the impact of RAID on application performance	Covered	
6	08/08/19	Levels along with the impact of RAID on application performance Contd	Covered	
7	09/08/19	Components of intelligent storage systems	Covered	
8	10/08/19	Virtual storage provisioning	Covered	
9	14/08/19	Intelligent storage system implementations	Covered	
10	16/08/19	Revision, Question papers solvation	Covered	
			Covered	
			Covered	
11	17/08/19	**Module – 2: Storage Networking Technologies and Virtualization** Fibre Channel SAN components	Covered	
12	21/08/19	connectivity options, and topologies including access protection mechanism "zoning"	Covered	
13	22/08/19	FC protocol stack, addressing and operations	Covered	
14	23/08/19	SAN-based virtualization and VSAN technology	Covered	
15	24/08/19	iSCSI and FCIP protocols for storage access over IP network	Covered	
16	28/08/19	Converged protocol FCoE and its components	Covered	
17	29/08/19	Network Attached Storage (NAS) - components	Covered	
18	30/08/19	Protocol and operations File level storage virtualization	Covered	
19	31/08/19	Object based storage and unified storage platform	Covered	
20	04/09/19	Revision, Question papers solution	Covered	
21	11/09/19	**Module – 3: Backup, Archive, and Replication** This unit focuses on information availability and business continuity solutions in both virtualized	Covered	
22	12/09/19	Non-virtualized environments, Business continuity terminologies	Covered	
23	13/09/19	Planning and solutions	Covered	
24	14/09/19	Clustering and multipathing architecture to avoid single points of failure	Covered	
25	18/09/19	Backup and recovery - methods, targets and topologies	Covered	
26	19/09/19	Data deduplication and backup in virtualized environment, Fixed content and data archive	Covered	
27	20/09/19	Local replication in classic and virtual environments	Covered	
28	21/09/19	Remote replication in classic and virtual environments	Covered	
29	25/09/19	Three-site remote replication and continuous data protection	Covered	

	26/09/19	Revision, Question papers solvation	Covered
31	27/09/19	**Module – 4: Cloud Computing Characteristics and benefits** This unit focuses on the business drivers	Covered
32	03/10/19	definition, essential characteristics	Covered
33	04/10/19	phases of journey to the Cloud	Covered
34	05/10/19	Business drivers for Cloud computing, Definition of Cloud computing	Covered
35	09/10/19	Characteristics of Cloud computing	Covered
36	10/10/19	Steps involved in transitioning from Classic data center to Cloud computing environment Services and deployment models	Covered
37	11/10/19	Steps involved in transitioning from Classic data center to Cloud computing environment Services and deployment models Conta...	Covered
38	12/10/19	Cloud infrastructure components	Covered
39	17/10/19	Cloud migration considerations	Covered
40	18/10/19	Revision, Question papers solvation	Covered
41	23/10/19	**Module – 5:-Securing and Managing Storage Infrastructure** This chapter focuses on framework	Covered
42	24/10/19	Domains of storage security along with covering security	Covered
43	30/10/19	implementation at storage networking	Covered
44	08/11/19	Security threats, and countermeasures in various domains Security solutions for FC-SAN	Covered
45	06/11/19	IP-SAN and NAS environments, Security in virtualized	Covered
46	07/11/19	Cloud environments, Monitoring and managing various information infrastructure components in classic	Covered
47	08/11/19	Virtual environments, Information lifecycle management (ILM)	Covered
48	09/11/19	Storage tiering	Covered
49	16/11/19	Cloud service management activities	Covered
50	20/11/19	Revision, Question papers solvation	Covered
51	27/11/19	Revision	Covered
52	28/11/19	Revision	Covered
53	29/11/19	Revision	Covered
54	30/11/19	Revision	Covered

TEXT BOOKS:

1. Information Storage and Management Author :EMC Education Services, Publisher: Wiley ISBN: 9781118094839
2. Storage Virtualization, Author: Clark Tom, Publisher: Addison Wesley Publishing Company ISBN : 9780321262516.

REFERENCE BOOKS:

NIL

[Mr. Suhan R]
Staff Incharge

[Prof. C V Shanmukaswamy]
HOD, CSE

[Dr. T HemadriNaidu]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2019-20 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
LABORATORY PLAN

Course Name: Web Technology laboratory with mini project | **Course Code: 15CSL76**
Class: VII Sem – All batch (WEDNESDAY) | **I.A. Marks: 20**
Hours/Week: 03 | **Exam Hours: 03**
Total Hours: 42. | **Exam Marks: 100**

Sl no.	DATE	TOPIC	Remarks
01	31-07-19	1. Write a JavaScript code to design a simple calculator to perform the following operations: sum, product, difference and quotient.	
02	07-08-19	2. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.	
03	14-08-19	3. Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR when the font size reaches to 40pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.	
04	21-08-19	4. Develop and demonstrate a HTML file that includes JavaScript script that uses functions for the following problems: a. Parameter: A string b. Output: The position in the string of the left most vowel c. Parameter: A number d. Output: The number with its digits in the reverse order	
05	28-08-19	5. Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Write an appropriate DTD for the XML document. Create a CSS style sheet and use it to display the document.	
06	04-09-19	**INTERNALS - I**	
07	11-09-19	6. Write a PHP program to keep track of the number of visitors visiting the web page and to display the count of visitors, with proper headings.	
08	18-09-19	7. Write a PHP program to display a digital clock which displays the current time of the server.	
09	25-09-19	8. Write the PHP program to do the following: a. Implement simple calculator operations. b. Find the transpose of a matrix. c. Multiplication of two matrices. d. Addition of two matrices.	
10	09-10-19	9. Write a PHP program named states.php that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas". Write a PHP program that does the following: a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named states List. b. Search for a word in states that begins with K and ends in s. Perform a case insensitive comparison. [Note: Pass string as a second parameter to method compile performs a case-insensitive comparison.] Store this word in element 1 of states List. c. Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list. d. Search for a word in states that ends in o. Store this word in element	

	"	3 of the list.
11	30-10-19	10. Write a PHP program to sort the student records which are stored in the database using selection sort
12	06-11-19	**INTERNALS –II**
13	13-11-19	**Mini Project Discussion**
14	20-11-19	**Mini Project Evaluation**
15	27-11-19	**INTERNALS –III**

Course Instructors
[Prof. Ramkaradhya.P.C]
[Prof. Sathish.B]

PRINCIPAL
SJBIT, BANGALORE

Head, Dept of CSE
[Prof.C.V.Sharma Gururaj]

Shridevi Institute of Engineering and Technology, Tumkur-06

Academic Year 2019-20 (Odd Sem)

DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: Web Technology laboratory with mini project | **Course Code: 15CSL76**

Class: VII Sem – A1 batch | **I.A. Marks: 20**

Hours/Week: 03 | **Exam Hours: 03**

Total Hours: 42 | **Exam Marks: 100**

Sl no.	DATE	TOPIC	Remarks
01	Week 1	1. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.	
02	Week 2	2. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.	
03	Week 3	3. Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.	
04	Week 4	4. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems: a. Parameter: A string b. Output: The position in the string of the first vowel c. Parameter: A number d. Output: The number with its digits in the reverse order	
05	Week 5	5. Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.	
06	Week 6	**INTERNALS –I**	
07	Week 7	6. Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.	
08	Week 8	7. Write a PHP program to display a digital clock which displays the current time of the server.	
09	Week 9	8. Write the PHP programs to do the following: a. Implement simple grab values operations. b. Find the transpose of a matrix. c. Multiplication of two matrices. d. Addition of two matrices.	
10	Week 10	9. Write a PHP program named state.php that declares a variable states with value="Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does the following: a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named states List. b. Search for a word in states that begins with k and ends in s. Perform a case insensitive comparison. [Note: Passing re. as a second parameter to method compile performs a case insensitive comparison.] Store this word in element 1 of states List. c. Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list.	

		d. Search for a word in states that ends in a. Store this word in element 3 of the list.	
11	Week 11	10. Write a PHP program to sort the student records which are stored in the database using selection sort.	
12	Week 12	**INTERNALS –II**	
13	Week 13	**Mini Project Discussion**	
14	Week 14	**Mini Project Evaluation**	
15	Week 15	**INTERNALS –III**	

PRINCIPAL
SIET, TURAKAPALLI

Head, Dept of C.S.E
[Prof.C.V.Shamuk...]

Course Instructors
[Prof. RenukaradhyaP.C]
[Prof. Sathish R]

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2019-20 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
LABORATORY PLAN

Course Name: Web Technology laboratory with mini project
Class: VII Sem – A2 batch (TUESDAY)
Hours/Week: 03
Total Hours: 42

Course Code: 17CSL76
I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	30-07-19	1. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.	
02	06-08-19	2. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.	
03	13-08-19	3. Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR. when the font size reaches 30pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.	
04	20-08-19	4. Develop and demonstrate a HTML file that includes JavaScript script that uses functions for the following problems: a. Parameter: A string b. Output: The position in the string of the left-most vowel c. Parameter: A number d. Output: The number with its digits in the reverse order	
05	27-08-19	5. Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.	
06	03-09-19	**INTERNALS –I**	
07	17-09-19	6. Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors with proper headings.	
08	24-09-19	7. Write a PHP program to display a digital clock which displays the current time of the server.	
09	01-10-19	8. Write the PHP programs to do the following: a. Implement simple calculator operations. b. Find the transpose of a matrix. c. Multiplication of two matrices. d. Addition of two matrices.	
10	22-10-19	9. Write a PHP program named states.php that declares a variable states with value "Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does the following: a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named states List. b. Search for a word in states that begins with k and ends in s. Perform a case insensitive comparison. [Note: Pass eregi, as a second parameter,to method compile performs a case-insensitive comparison.] Store this word in element1 of states List. c. Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list. d. Search for a word in states that ends in a. Store this word in element	

		3 of the list.	
13	05-10-19	10. Write a PHP program to sort the student records which are stored in the database using selection sort.	
12	12-11-19	**INTERNALS –II**	
13	19-11-19	**Mini Project Discussion**	**Extra Lab**
14	19-11-19	**Mini Project Evaluation**	
15	26-11-19	**INTERNALS –III**	

Course Instructors
[Prof. Keerthi Jayalakshmi P.C]
[Prof. Sudhan R]

PRINCIPAL
BIET, DAVANGERE

Head, Dept of CSE
[Prof C.V Shivamurthy]

19-20 EVEN

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

EVEN - 19-20

SUBJECT	DESIGN AND ANALYSIS OF ALGORITHMS	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS42	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04/02/20	TUE	**Module 1: Introduction:** What is an Algorithm?, Algorithm Specification	4/2/20	Completed
2	05/02/20	WED	Analysis Framework , **Performance Analysis:** Space complexity, Time complexity	5/2/20	"
3	06/02/20	THU	**Asymptotic Notations:** Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and Little-oh notation (o)	6/2/20	"
4	07/02/20	SAT	Mathematical analysis of recursive Algorithms with Examples	7/2/20	"
5	11/02/20	TUE	Examples Contin.....	11/2/20	"
6	12/02/20	WED	Mathematical analysis of Non-Recursive with Examples	12/2/20	"
7	13/02/20	THU	Examples Contin.....	13/2/20	"
8	15/02/20	SAT	**Important Problem Types:** Sorting, Searching, String processing,	15/2/20	"
9	18/02/20	TUE	Graph Problems, Combinatorial Problems.	18/2/20	"
10	19/02/20	WED	**Fundamental Data Structures:** Stacks, Queues, Graphs	19/2/20	"
11	20/02/20	SAT	**Fundamental Data Structures:** Trees	20/2/20	"
12	25/02/20	TUE	**Fundamental Data Structures:** Sets and Dictionaries	25/2/20	"

SUMMARY

PLANNED DATE	FROM: 04.02.2020	TO: 25.02.2020	
ACTUAL CLASSES TAKEN	FROM: 4.02.2020	TO: 25.02.2020	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R

Prof. C V Shanmukaswamy

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106
Dr. Vishwanatha Rudrappa

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	26/02/20	WED	**Module 2:** **Divide and Conquer**: General method, Binary search	26/2/20	Completed
14	27/02/20	THU	Recurrence equation for divide and conquer	27/2/20	—
15	29/02/20	SAT	Finding the maximum and minimum	29/2/20	—
16	29/02/20	SAT	Merge sort	29/2/20	—
17	03/03/20	TUE	Merge sort Continu.....	3/3/20	—
18	04/03/20	WED	Quick sort	4/3/20	—
19	05/03/20	THU	Quick sort Continu.....	5/3/20	—
20	07/03/20	SAT	Strassen's matrix multiplication	7/3/20	—
21	10/03/20	TUE	Strassen's matrix multiplication Contin.....	10/3/20	—
22	11/03/20	WED	Advantages and Disadvantages of divide and conquer	11/3/20	—
23	12/03/20	THU	**Decrease and Conquer Approach:** Topological Sort	12/3/20	—
24	17/03/20	TUE	Topological Sort Continu.....	14/3/20	—

SUMMARY

PLANNED DATE	**FROM: 26.02.2020**	**TO: 17.03.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 26/2/20	**TO:** 14/3/20	
NUMBER OF CLASSES	**ALLOCATED:** 12	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	18/03/20	WED	**Module 3:** **Greedy Method:** General method	30/3/20	Completed
25	19/03/20	THU	Coin Change Problem	30/3/20	—
26	21/03/20	SAT	Knapsack Problem	31/3/20	—
27	24/03/20	TUE	Job sequencing with deadlines	01/4/20	—
28	26/03/20	THU	**Minimum cost spanning trees:** Prim's Algorithm	02/4/20	—
29	28/03/20	SAT	Prim's Algorithm Contins...and Kruskal's Algorithm	05/4/20	—
30	28/02/20	SAT	Kruskal's Algorithm Contins....	03/4/20	—
31	31/02/20	TUE	**Single source shortest paths:** Dijkstra's Algorithm	06/4/20	—
32	01/04/20	WED	**Optimal Tree problem:** Huffman Trees and Codes	09/4/20	—
33	02/04/20	THU	Huffman Trees and Codes Contins.....	09/4/20	—
34	04/04/20	SAT	**Transform and Conquer Approach:** Heaps and Heap Sort	11/4/20	—
35	07/04/20	TUE	Heaps and Heap Sort Contins.....	11/4/20	—

SUMMARY

PLANNED DATE	FROM: 18.03.2020 30/3/20	TO:07.04.2020 11/4/20	
ACTUAL CLASSES TAKEN	FROM: 30/3/20	TO: 11/4/20	
NUMBER OF CLASSES	ALLOCATED: 10 12	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C V Sharmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	08/04/20	WED	**Module 4:** **Dynamic Programming:** General method with Examples,	13/4/20	Collected
37	09/04/20	THU	Multistage Graphs	13/4/20	—
38	11/04/20	SAT	Multistage Graphs Continu...	14/4/20	—
39	15/04/20	WED	**Transitive Closure:** Warshall's Algorithm	16/4/20	—
40	16/04/20	THU	Warshall's Algorithm Continu...	16/4/20	—
41	18/04/20	SAT	**All Pairs Shortest Paths:** Floyd's Algorithm	20/4/20	—
42	21/04/20	TUE	Floyd's Algorithm Continu.....	20/4/20	—
43	22/04/20	WED	Optimal Binary Search Trees	23/4/20	—
44	23/04/20	THU	Knapsack problem	27/4/20	—
45	28/04/20	TUE	Knapsack problem Continu...	27/4/20	—
46	29/04/20	WED	Travelling Sales Person problem	29/4/20	—
47	30/04/20	THU	Reliability design	4/5/20	—

SUMMARY

PLANNED DATE	FROM: 08.04.2020 13/4/20	TO: 30.04.2020 4/5/20	
ACTUAL CLASSES TAKEN	FROM: 13/4/20	TO: 4/5/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	05/05/20	TUE	**Module 5:** **Backtracking:** General method	11/5/20	
49	06/05/20	WED	N-Queens problem	13/5/20	
50	07/05/20	THU	Sum of subsets problem	14/5/20	
51	09/05/20	SAT	Graph coloring	18/5/20	
52	12/05/20	TUE	Hamiltonian cycles	19/5/20	
53	13/05/20	WED	**Programme and Bound:** Assignment Problem	20/5/20	
54	14/05/20	THU	Assignment Problem Continu...	20/5/20	
55	19/05/20	TUE	Travelling Sales Person problem	21/5/20	
56	20/05/20	WED	**0/1 Knapsack problem:** LC Programme and Bound solution , FIFO Programme and Bound solution	01/6/20	
57	30/05/20	FRI	**NP-Complete and NP-Hard problems:** Basic concepts, non-deterministic algorithms	4/6/20	
58	01/06/20	MON	P, NP, NP-Complete, and NP-Hard classes	5/6/20	

SUMMARY

PLANNED DATE	**FROM: 05.05.2020** 11/5/20	**TO: 01.06.2020** 5/6/20	
ACTUAL CLASSES TAKEN	**FROM:** 11/5/20	**TO:** 05/6/20	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

19-20 (Even)

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACROSCHEDULE

SUBJECT	**DESIGN AND ANALYSIS OF ALGORITHMS**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS42**	**SEM/SEC**	**IV**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

CO1: Describe computational solution to well known problems like searching, sorting etc.
CO2: Estimate the computational complexity of different algorithms.
CO3: Devise an algorithm using appropriate design strategies for problem solving

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	3.02.2020 to 22.02.2020	**Module- 1** **Introduction:** What is an Algorithm? , Algorithm Specification , Analysis Framework , **Performance Analysis**: Space complexity, Time complexity. **Asymptotic Notations:** Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and Little-oh notation (o), Mathematical analysis of Non-Recursive and recursive Algorithms with Examples. **Important Problem Types:** Sorting, Searching, String processing, Graph Problems, Combinatorial Problems. **Fundamental Data Structures:** Stacks, Queues, Graphs, Trees, Sets and Dictionaries. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=8IAPZzGSbME&list=PLDN4rrl48XKpZkf03iYFl-O29szjTrs_O https://www.youtube.com/watch?v=GONTBv5cKbE&list=PLrjkTqi3jnnf8wGQvNbgdmm2gkoa9CXCmt https://www.youtube.com/watch?v=wEIoi07gEE&list=PLcJvKqDz2Atd--1GsJWB8amWOWRbEM7WW
2.	24.02.2020 to 12.03.2020	**Module -2** **Divide and Conquer**: General method, Binary search, Recurrence equation for divide and conquer, Finding the maximum and minimum , Merge sort, Quick sort, Strassen's matrix multiplication , Advantages and Disadvantages of divide and conquer. **Decrease and Conquer Approach:** Topological Sort. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=2Rr2tW9zvRg https://www.youtube.com/watch?v=YAE1FsYGotA https://www.youtube.com/watch?v=PfEmF07S4hw

3.	13.03.2020 to 7.04.2020	**Module -3** **Greedy Method:** General method, Coin Change Problem, Knapsack Problem, Job sequencing with deadlines. **Minimum cost spanning trees:** Prim's Algorithm, Kruskal's Algorithm. **Single source shortest paths:** Dijkstra's Algorithm . **Optimal Tree problem:** Huffman Trees and Codes . **Transform and Conquer Approach:** Heaps and Heap Sort . **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=ARvQcqJ_-NY https://www.youtube.com/watch?v=IMOpX3q9NJI https://www.youtube.com/watch?v=GQNTDv5zKhE&list=PLrjkTqI3jnm8wGQvNhgdmm2gkon8CXCml
4.	8.04.2020 to 30.04.2020	**Module -4** **Dynamic Programming:** General method with Examples, Multistage Graphs . **Transitive Closure:** Warshall's Algorithm, **All Pairs Shortest Paths:** Floyd's Algorithm, Optimal Binary Search Trees, Knapsack problem , Bellman-Ford Algorithm , Travelling Sales Person problem , Reliability design. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLJLIlvbz0rE83NKbnq7acXYIeA0o1dXb https://www.youtube.com/watch?v=IVR2u9lnxI8&list=PLdo5W4Nhv31a8rJE1WS4MR9LRfbmZrAQu https://www.youtube.com/watch?v=oN10rf2P9gE https://www.youtube.com/watch?v=Gc4mWrmJBsw

8.	1.05.2020 to 1.06.2020	**Module -5** **Backtracking:** General method , N-Queens problem , Sum of subsets problem, Graph coloring, Hamiltonian cycles. **Programme and Bound:** Assignment Problem, Travelling Sales Person problem, **0/1 Knapsack problem:** LC Programme and Bound solution, FIFO Programme and Bound solution. **NP-Complete and NP-Hard problems:** Basic concepts, non-deterministic algorithms, P, NP, NP-Complete, and NP-Hard classes . **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=DKChsiDBN6c https://www.youtube.com/watch?v=xFv_Hl4B83A https://www.youtube.com/watch?v=Lm378j0CuYM&list=PL8xmnNn7pYtwcQRtWxbyGA7OfmGcNBsbv https://www.youtube.com/watch?v=3RBNPe0_Q6g https://www.youtube.com/watch?v=1FEP_sNb62k https://www.youtube.com/watch?v=PfkBS9qIMRE https://www.youtube.com/watch?v=nLmhmB6NzcM

Suthan R
Staff Incharge

Prof. C V Shamenkaiswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGG. & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

SHRIDEVI

(An ISO 9001:2015 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (Even)

PRACTICAL SESSION PLAN

Course: DESIGN AND ANALYSIS OF ALGORITHMS LABORATORY

Class: IV **Code: 18CSL47**

Sl. No	Date	TOPIC	Remarks
1.	1st week	**Demo on Simple Programs**	
2.	2nd week	1a)Create a Java class called *Student* with the following details as variables within it. (i) USN (ii) Name (iii) Programme (iv) Phone Write a Java program to create *n*Student objects and print the USN, Name, Programme, and Phone of these objects with suitable headings. b) Write a Java program to implement the Stack using arrays. Write Push(), Pop(), and Display() methods to demonstrate its working.	
3	3rd week	2a)Design a super class called *Staff* with details as Staff Id, Name, Phone, Salary. Extend this class by writing three subclasses namely *Teaching* (domain, publications), *Technical* (skills), and *Contract* (period). Write a Java program to read and display at least 3 *staff* objects of all three categories. b) Write a Java class called *Customer* to store their name and date_of_birth. The date_of_birth format should be dd/mm/yyyy. Write methods to read customer data as <name, dd/mm/yyyy> and display as <name, dd, mm, yyyy> using String Tokenizer class considering the delimiter character as "/".	
4.	4th week	**3a)** Write a Java program to read two integers *a* and *b*. Compute *a/b* and print, when *b* is not zero. Raise an exception when *b* is equal to zero. b) Write a Java program that implements a multi-thread application that has three threads. First thread generates a random integer for every 1 second; second thread computes the square of the number and prints; third thread will print the value of cube of the number.	
5.	5th week	**4** Sort a given set of *n* integer elements using **Quick Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000 and record the time taken to sort. Plot a graph of the time taken versus *n* on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.	
6.	6th week	**5.** Sort a given set of *n* integer elements using **Merge Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000, and record the time taken to sort. Plot a graph of the time taken versus *n* on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.	
7.	7th week	**6.** Implement in Java, the **0/1 Knapsack** problem using (a) Dynamic Programming method (b) Greedy method.	
8.	8th week	First Lab IA	

9.	9th week	7. From a given vertex in a weighted connected graph, find shortest paths to other vertices using **Dijkstra's algorithm**. Write the program in Java.	
10	10th week	8.Find Minimum Cost Spanning Tree of a given connected undirected graph using **Kruskal'salgorithm.** Use Union-Find algorithms in your program.	
11.	11th week	9. Find Minimum Cost Spanning Tree of a given connected undirected graph using **Prim's algorithm**	
12.	12th week	**10.** Write Java programs to (a) Implement All-Pairs Shortest Paths problem using **Floyd's algorithm.** (b) Implement **Travelling Sales Person problem** using Dynamic programming.	
13.	13th week	**11.** Design and implement in Java to find a **subset** of a given set **S** = {Sl, S2,.....,Sn} of ***n*** positive integers whose SUM is equal to a given positive integer ***d***. For example, if S ={1, 2, 5, 6, 8} and ***d***= 9, there are two solutions {1,2,6}and {1,8}. Display a suitable message, if the given problem instance doesn't have a solution **12.** Design and implement in Java to find all **Hamiltonian Cycles** in a connected undirected Graph G of *n* vertices using backtracking principle.	
14.	14th week	Second Lab IA	
15.	15th week	Third Lab IA	

[Mr Suthan R & Mr.Kiran G M]
Staff-Incharge

PRINCIPAL
BIET, TUMAKURU

[Prof.C.V Shanmukaswamy]
HOD, Dept of CSE

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2015 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2019-20 (Even)

PRACTICAL SESSION PLAN

Staff: Mr Suthan R & Mr.Kiran G M **Class: IV – A1(Monday)**
Course: DESIGN AND ANALYSIS OF ALGORITHMS LABORATORY **Code: 18CSL47**

Sl. No	Date	TOPIC	Remarks
1.	03/02/2020	**Demo on Simple Programs**	
2.	10/02/2020	**1a)**Create a Java class called ***Student*** with the following details as variables within it. (i) USN (ii) Name (iii) Programme (iv) Phone Write a Java program to create *n*Student objects and print the USN, Name, Programme, and Phone of these objects with suitable headings. b) Write a Java program to implement the Stack using arrays. Write Push(), Pop(), and Display() methods to demonstrate its working.	
3	17/02/2020	**2a)**Design a super class called *Staff* with details as Staff Id, Name, Phone, Salary. Extend this class by writing three subclasses namely *Teaching* (domain, publications), *Technical* (skills), and *Contract* (period). Write a Java program to read and display at least 3 *staff* objects of all three categories. b) Write a Java class called *Customer* to store their name and date_of_birth. The date_of_birth format should be dd/mm/yyyy. Write methods to read customer data as <name, dd/mm/yyyy> and display as <name, dd, mm, yyyy> using String Tokenizer class considering the delimiter character as "/".	
4.	24/02/2020	**3a)** Write a Java program to read two integers *a* and *b*. Compute *a/b* and print, when *b* is not zero. Raise an exception when *b* is equal to zero. b) Write a Java program that implements a multi-thread application that has three threads. First thread generates a random integer for every 1 second; second thread computes the square of the number and prints; third thread will print the value of cube of the number.	
5.	02/03/2020	**4** Sort a given set of ***n*** integer elements using **Quick Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000 and record the time taken to sort. Plot a graph of the time taken versus *n*on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.	
6.	09/03/2020	**5.** Sort a given set of ***n*** integer elements using **Merge Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000, and record the time taken to sort. Plot a graph of the time taken versus *n*on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.	
7.	23/03/2020	**6.** Implement in Java, the **0/1 Knapsack** problem using (a) Dynamic Programming method (b) Greedy method.	

8.	30/03/2020	First Lab IA	
9.	13/04/2020	7. From a given vertex in a weighted connected graph, find shortest paths to other vertices using **Dijkstra's algorithm**. Write the program in Java.	
10.	20/04/2020	8.Find Minimum Cost Spanning Tree of a given connected undirected graph using **Kruskal'salgorithm.** Use Union-Find algorithms in your program.	
11.	04/05/2020	9. Find Minimum Cost Spanning Tree of a given connected undirected graph using **Prim's algorithm**	
12.	07/05/2020	10. Write Java programs to (a) Implement All-Pairs Shortest Paths problem using **Floyd's algorithm.** (b) Implement **Travelling Sales Person problem** using Dynamic programming.	**Extra**
13.	11/05/2020	11. Design and implement in Java to find a **subset** of a given set **S** = {S1, S2,.....Sn} of *n* positive integers whose SUM is equal to a given positive integer *d*. For example, if S ={1, 2, 5, 6, 8} and *d*= 9, there are two solutions {1,2,6}and {1,8}. Display a suitable message, if the given problem instance doesn't have a solution 12. Design and implement in Java to find all **Hamiltonian Cycles** in a connected undirected Graph G of *n* vertices using backtracking principle.	
14.	18/05/2020	Second Lab IA	
15.	21/05/2020	Third Lab IA	

[Mr Suthan R & Mr.Kiran G M]
Staff-Incharge

[Prof.C.V Shanmukaswamy]
HOD, Dept of CSE

PRINCIPAL
BNIT, TUMAKURU

EVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACROSCHEDULE (Even SEM 19-20)

SUBJECT	Operating System	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS43	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Demonstrate need for OS and different types of OS
- Discuss suitable techniques for management of different resources
- Illustrate processor, memory, storage and file system commands
- Explain the different concepts of OS in platform of usage through case studies

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	20.04.2021 to 11.05.2021	**Module- 1: Introduction to operating systems, System structures** What operating systems do; Computer System organization; Computer System architecture; Operating System structure; Operating System operations; Process management; Memorymanagement; Storage management; Protection and Security; Distributed system; Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface; System calls; Types of system calls; System programs; Operating system design and implementation; Operating System structure; Virtual machines; Operating System generation; System boot. **ProcessManagement** Process concept; Process scheduling; Operations on processes;Inter process communication **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=RoumWxUZM https://www.youtube.com/watch?v=aDa8mBwcoKI&list=PLzkTuIJ3aw0U10zPaP2f9QG2fiSkUwIFn https://www.youtube.com/watch?v=EA6tC99vdo4 https://www.youtube.com/watch?v=tWPw-r2GM0 https://www.youtube.com/watch?v=5n2-xABWLC4
2	13.05.2021 to 03.06.2021	**Module -2 Multi-threaded Programming** Overview; Multithreading models; Thread Libraries; Threading issues. Process Scheduling: Basic concepts; Scheduling Criteria; Scheduling Algorithms; Multiple-processor scheduling; Thread scheduling. **Process Synchronization:** Synchronization; The critical section problem; Peterson's solution; Synchronization hardware; Semaphores; Classical problems of synchronization; Monitors **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=EZYtfrfAb https://www.youtube.com/watch?v=AiYkE8GIeEU&list=PLzkTuIJ3aw0U10zPaP2f9QG2fiSkUwIFn&index=10 https://www.youtube.com/watch?v=mdO1VOcf3Ig

3	04.06.2021 to 24.06.2021	**Module -3: Deadlocks** Deadlocks; System model; Deadlock characterization; Methods for handling deadlocks; Deadlock prevention; Deadlock avoidance; Deadlock detection and recovery from deadlock. **Memory Management:** Memory management strategies: Background; Swapping; Contiguous memory allocation; Paging; Structure of page table; Segmentation. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Deadlocks%3B+System+model https://www.youtube.com/watch?v=8Ym0vZN0e08 https://www.youtube.com/results?search_query=Memory+management+strategies%3A+Background%3B+Swapping%3B+
4	25.06.2021 to 15.07.2021	**Module -4** **Virtual Memory Management**: Background; Demand paging; Copy-on-write; Page replacement; Allocation of frames; Thrashing. **File System, Implementation of File System:** File system: File concept; Access methods; Directory structure; File system mounting; File sharing; Protection: Implementing File system: File system structure; File system implementation; Directory implementation; Allocation methods; Free space management. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=NPbwrIuYZo8 https://www.youtube.com/watch?v=s01g_aaZ5I0 https://www.youtube.com/watch?v=8Bb83hqHEx https://www.youtube.com/watch?v=2Hlag0wk0rM&list=PLr6QvPIR3i0rhaGGBe1yCn5bv3MHDwvECI
5	16.07.2021 to 07.08.2021	**Module -5** **Secondary Storage Structures, Protection:** Mass storage structures; Disk structure; Disk attachment; Disk scheduling; Disk management; Swap space management. Protection: Goals of protection, Principles of protection, Domain of protection, Access matrix, Implementation of access matrix, Access control, Revocation of access rights, Capability- Based systems. **Case Study: The LinuxOperating System:** Linux history; Design principles; Kernel modules; Process management; Scheduling; Memory Management; File systems, Input and output; Inter-process communication. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=1v0hdf9M6Ao https://www.youtube.com/watch?v=Je9Ly4Vx4ml https://www.youtube.com/watch?v=D01hvf9Cnl4 https://www.youtube.com/watch?v=4bGsrmdOkcY

TEXT BOOKS:

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Principles 7edition, Wiley-India, 2006

REFERENCE BOOKS:

1. Ann McHoes Ida M Flynn, Understanding Operating System, Cengage Learning, 6thEdition
2. D.M Dhamdhere, Operating Systems: A Concept Based Approach 3rd Ed, McGraw- Hill, 2013.
3. P.C.P. Bhatt, An Introduction to Operating Systems: Concepts and Practice 4th Edition, PHI(EEE), 2014.
4. William Stallings Operating Systems: Internals and Design Principles, 6th Edition, Pearson.

Kiran G M
Staff Incharge

Prof. C.Y Shashikanth swamy
HOD, CSE
HOD
COMPUTER SCIENCE & ENGG.
SIT, TUMAKURU-03.

Dr. Narendra Viswanath
Principal
PRINCIPAL
SIT, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MICROSCHEDULE (EVEN 19-20)

SUBJECT	OPERATING SYSTEM	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS43	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	20/04/21	TUE	**Introduction to OS, System structures:** What operating systems Does	✓	
2	22/04/21	THU	Computer System architecture; Operating System structure; Operating System operations; Process management.	✓	
3	23/04/21	FRI	Memory management; Storage management; Protection and security; Distributed system.	✓	
4	24/04/21	SAT	Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface.	✓	
5	27/04/21	TUE	System calls; Types of system calls; System programs.	✓	
6	29/04/21	THU	Operating System design and implementation.	✓	
7	30/04/21	FRI	Operating System structure.	✓	
8	04/05/21	TUE	Virtual machines; Operating system generation; System boot.	✓	
9	06/05/21	THU	**Process Management** Process concept; Process scheduling	✓	
10	07/05/21	FRI	Operations on processes; Inter process communication	✓	

SUMMARY

PLANNED DATE	FROM: 20.04.2021	TO: 11.05.2021	
ACTUAL CLASSES TAKEN	FROM: 30/4/21	TO: 11/5/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof.C V Sharadeswary
HOD/CSE

Dr. Narendra Viswanath
Principal

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	13/05/21	THU	**Multi-threaded Programming**: Multi-Threaded Programming: Overview	✓	
12	15/05/21	SAT	Multithreading models.	✓	
13	18/05/21	TUE	Thread Libraries, threading issues.	✓	
14	20/05/21	THU	Process Scheduling: Basic concepts; Scheduling criteria.	✓	
15	21/05/21	FRI	Scheduling algorithms.	✓	
16	22/05/21	SAT	Multiple-Processor scheduling; Thread scheduling.	✓	
17	25/05/21	TUE	**Process Synchronization:** Synchronization basic concepts.	✓	
18	27/05/21	THU	Critical section problem, Peterson's solution, Synchronization hardware	✓	
19	28/05/21	FRI	Semaphores.	✓	
20	29/05/21	SAT	Monitors.	✓	

SUMMARY

PLANNED DATE	FROM: 13.05.2021	TO: 29.05.2021	
ACTUAL CLASSES TAKEN	FROM: 13/5/21	TO: 29/5/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V [illegible]
HOD, CSE
HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-08

Dr. Narendra Viswanath
Principal

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	04/06/21	FRI	**DEADLOCKS:** System model; Deadlock characterization	✓	
22	05/06/21	SAT	Methods for handling deadlocks	✓	
23	08/06/21	TUE	Deadlock prevention	✓	
24	10/06/21	THU	Deadlock avoidance.	✓	
25	11/06/21	FRI	Deadlock detection and recovery from deadlock.	✓	
26	12/06/21	SAT	Deadlocks continued	✓	
27	15/06/21	TUE	**Memory Management:** Memory management strategies: Background; Swapping;	✓	
28	17/06/21	THU	Contiguous memory allocation; Paging;	✓	
29	18/06/21	FRI	Structure of page table;	✓	
30	19/06/21	SAT	Segmentation	✓	

SUMMARY

PLANNED DATE	FROM: 4.06.2021	TO:19.06.2021	
ACTUAL CLASSES TAKEN	FROM: 4/6/21	TO: 19/6/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C. C. Shanmukaswamy
HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-06.

Dr. Narendra Viswanath
Principal
PRINCIPAL
SIET, TUMAKURU

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	25/06/21	FRI	**Virtual Memory Management**: Background.	✓	
32	26/06/21	SAT	Demand paging.	✓	
33	29/06/21	TUE	Copy-on-write; Page replacement.	✓	
34	01/07/21	THU	Allocation of threads and thrashing.	✓	
35	02/07/21	FRI	Implementing File System: File system structure.	✓	
36	03/07/21	SAT	File system implementation: Directory implementation.	✓	
37	06/07/21	TUE	Allocation methods.	✓	
38	08/07/21	THU	Allocation methods Contd…	✓	
39	09/07/21	FRI	Free space management	✓	
40	10/07/21	SAT	Free space management Contd…	✓	

SUMMARY

PLANNED DATE	FROM: 25.06.2021	TO: 10.07.2021	
ACTUAL CLASSES TAKEN	FROM: 25/6/21	TO: 10/7/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C Y [illegible]
HOD CSE
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-05

Dr. Narendra Viswanath
Principal

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	16/07/21	FRI	**Secondary Storage Structures, Protection:** Mass Storage structures; Disk structure.	✓	
42	17/07/21	SAT	Disk attachment; Disk scheduling.	✓	
43	20/07/21	TUE	Swap space management.	✓	
44	22/07/21	THU	Protection: Goals of protection.	✓	
45	23/07/21	FRI	Principles of protection, Domain of protection, Access matrix.	✓	
46	24/07/21	SAT	Domain of protection, Access matrix.	✓	
47	27/07/21	TUE	Implementation of access matrix.	✓	
48	29/07/21	THU	Access matrix Continued	✓	
49	30/07/21	FRI	Access control.	✓	
50	31/07/21	SAT	Revocation of access rights. Capability-Based systems.	✓	

SUMMARY

PLANNED DATE	**FROM: 16.07.2021**	**TO: 31.07.2021**	
ACTUAL CLASSES TAKEN	**FROM: 16/7/21**	**TO: 31/7/21**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Prof. C V Sunmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE (Even 19-20)

SUBJECT	CNS	STAFF NAME	KIRAN G M
SUBJECT CODE	17CS61	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/20	MON	Cyber Attacks , Defence Strategies and Techniques	Covered	
2	04/02/20	TUE	Guiding Principles.	Covered	
3	06/02/20	THU	Mathematical Background for Cryptography - Modulo Arithmetic's	Covered	
4	07/02/20	FRI	The Greatest Comma Divisor	Covered	
5	10/02/20	MON	Useful Algebraic Structures	Covered	
6	11/02/20	TUE	Chinese Remainder Theorem	Covered	
7	13/02/20	THU	Basics of Cryptography - Preliminaries	Covered	
8	14/02/20	FRI	Elementary Substitution Ciphers	Covered	
9	17/02/20	MON	Elementary Transport Ciphers, Other Cipher Properties	Covered	
10	18/02/20	TUE	Secret Key Cryptography – Product Ciphers, DES Construction	Covered	

SUMMARY

PLANNED DATE	FROM: 3/2/20	TO: 18/2/20	
ACTUAL CLASSES TAKEN	FROM: 3/2/20	TO: 18/2/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	20/02/20	FRI	RSA Operations	Covered	
12	20/02/20	THU	Why Does RSA Work? Performance, Applications	Covered	
13	24/02/20	MON	Practical Issues	Covered	
14	25/02/20	TUE	Public Key Cryptography Standard (PKCS)	Covered	
15	27/02/20	THU	Cryptographic Hash - Introduction, Properties	Covered	
16	28/02/20	FRI	Construction, Applications and Performance	Covered	
17	02/03/20	MON	The Birthday Attack	Covered	
18	03/03/20	TUE	Discrete Logarithm and its Applications Introduction	Covered	
19	05/03/20	THU	Diffie-Hellman Key Exchange	Covered	
20	06/03/20	FRI	Other Applications.	Covered	

SUMMARY

PLANNED DATE	FROM: 20|2|20	TO: 06|3|20	
ACTUAL CLASSES TAKEN	FROM: 20|2|20	TO: 06|3|20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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TUMKUR - 572106.

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	09/03/20	MON	Introduction, Digital Certificates	Covered	
22	10/03/20	TUE	Public Key Infrastructure, Identity–based Encryption	Covered	
23	12/03/20	THU	Authentication–I - One way Authentication	Covered	
24	17/03/20	TUE	Mutual Authentication, Dictionary Attacks	Covered	
25	19/03/20	THU	Authentication – II – Centalised Authentication	Covered	
26	20/03/20	FRI	The Needham-Schroeder Protocol, Kerberos, Biometrics	Covered	
27	23/02/20	MON	IPSec- Security at the Network Layer – Security at Different layers: Pros and Cons	Covered	
28	24/02/20	TUE	IPSec in Action, Internet Key Exchange (IKE) Protocol, Security Policy and IPSEC.	Covered	
29	26/03/20	THU	Virtual Private Networks, Security at the Transport Layer - Introduction,	Covered	
30	27/03/20	FRI	SSL Handshake Protocol, SSL Record Layer Protocol, OpenSSL	Covered	

SUMMARY

PLANNED DATE	**FROM: 09.03.2020**	**TO:27.03.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 9/3/20	**TO:** 27/3/20	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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PRINCIPAL

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	30/03/20	MON	IEEE 802.11 Wireless LAN Security - Background. Authentication	Covered	
32	31/03/20	TUE	Confidentiality and Integrity, Viruses, Worms, and Other Malware	Covered	
33	02/04/20	THU	Firewalls – Basics	Covered	
34	09/04/20	THU	Practical Issues, Intrusion Prevention and Detection - Introduction	Covered	
35	16/04/20	THU	Prevention Versus Detection	Covered	
36	17/04/20	FRI	Types of Instruction Detection Systems	Covered	
37	20/04/20	MON	DDoS Attacks Prevention/Detection	Covered	
38	21/04/20	TUE	Web Service Security – Motivation	Covered	
39	23/04/20	THU	Technologies for Web Services	Covered	
40	28/04/20	TUE	WS- Security, SAML, Other Standards.	Covered	

SUMMARY

PLANNED DATE	**FROM:** 30/3/20	**TO:** 28/4/20	
ACTUAL CLASSES TAKEN	**FROM:** 30/3/20	**TO:** 28/4/20	
NUMBER OF CLASSES	**ALLOCATED:** 10	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	30/04/20	THU	IT act aim and objectives	Covered	
42	04/05/20	MON	Scope of the act, Major Concepts	Covered	
43	05/05/20	TUE	Important provisions, Attribution, acknowledgement, and dispatch of electronic records	Covered	
44	07/05/20	THU	Secure electronic records and secure digital signatures	Covered	
45	08/05/20	FRI	Regulation of certifying authorities: Appointment of Controller and Other officers	Covered	
46	11/05/20	MON	Digital Signature certificates, Duties of Subscribers	Covered	
47	12/05/20	TUE	Penalties and adjudication	Covered	
48	14/05/20	THU	The cyber regulations appellate tribunal	Covered	
49	15/05/20	FRI	Offences, Network service providers not to be liable in certain cases,	Covered	
50	18/05/20	MON	Miscellaneous Provisions	Covered	

SUMMARY

PLANNED DATE	FROM: 30/4/20	TO: 18/5/20	
ACTUAL CLASSES TAKEN	FROM: 30/4/20	TO: 18/5/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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EVEN 19-20

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CSE Even Sem [2019-20]

LESSON PLAN (FEB -JUNE 2020) MACRO SCHEDULE

COURSE	**PYTHON APPLICATION PROGRAMMING**	**STAFF NAME**	**Prof. C. V. Shanmuka swamy**
COURSE CODE	**15CS664**	**SEM/SEC**	**VI**
IA Marks (CIE)	**40** (Average of three tests for 30 marks and 10 marks for assignment)	**Maximum Exam Marks (SEE)**	**60** (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes [CO's]
The student will be able to :

CO1: Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.

CO2: Demonstrate proficiency in handling Strings and File Systems.

CO3: Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.

CO4: Interpret the concepts of Object-Oriented Programming as used in Python.

CO5: Implement exemplary applications related to Network Programming, Web Services and Databases in Python.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	**03.02.2020 to 18.02.2020**	**Module- 1:** Why should you learn to write programs, Variables, expressions and statements, expressions and statements, Conditional execution, Functions in python Question paper discussion. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=WGJJIrtnfpk www.infytq.com [Pythonfbeginners] https://ocw.mit.edu › courses › electrical-engineering-and-computer-scienc
2	**19.02.2020 to 05.03.2020**	**Module -2** Iteration in python, Loop patterns, Debugging, Strings in python, String comparison, string methods, Parsing strings, Format operator, Debugging, Files Persistence, Opening files ,Text files and lines, Using try, except, and open Writing files, Debugging, Question paper discussion **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=WGJJIrtnfpk www.infytq.com [Pythonfbeginners] https://ocw.mit.edu › courses › electrical-engineering-and-computer-science
3	**09.03.2020 to 26.03.2020**	**Module -3: :** Lists A list is a sequence , Lists are mutable ,Traversing a list, List operations, List slices, List methods, Lists and functions, Lists and strings , Parsing lines. Dictionaries as a set of counters,Dictionaries and files, Looping and dictionaries, Advanced text parsing. Tuples are immutable, Comparing tuples, Tuple assignment Dictionaries and tuples ,Multiple assignment with	https://www.youtube.com/watch?v=WGJJIrtnfpk www.infytq.com [Python Data structures]

		dictionaries ,The most common words, Regular expressions, Character matching in regular expressions, Extracting data using regular expressions, Combining searching and extracting , Escape character,Question paper discussion. **No. of Contact Sessions: 11**	https://ocw.mit.edu/courses/electrical-engineering-and-computer-science
4	**30.03.2020 to 21.04.2020**	**Module -4** Classes and objects, User-defined types, Rectangles Copying and Debugging, Classes and functions, Modifiers, Debugging, Classes and methods, The init method Polymorphism and Debugging, Question paper discussion **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=WGJJIrtnfpk www.infytq.com [Python Data structures] https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-0001-introduction-to-computer-science-and-programming-in-python-fall-2016/lecture-videos/lecture-8-python-classes-and-inheritance/
5	**22.04.2020 to 11.05.2020**	**Module -5** Networked programs, Using Web Services, Parsing XML ,Looping through nodes, Application Programming Interfaces ,Google geo coding web service , Security and API usage, Using databases and SQL, Programming with multiple tables, Three kinds of keys ,Using JOIN to retrieve data, Question paper discussion. **No. of Contact Sessions: 11**	www. Infytq.com [Python with Network Programming module www. Infytq.com [Python with DBMS module]

Text Books:

1. Charles R. Severance, "Python for Everybody: Exploring Data Using Python 3", 1st Edition, CreateSpace Independent Publishing Platform, 2016. (http://do1.drchuck.com/pythonlearn/EN_us/pythonlearn.pdf) (Chapters 1 – 13, 15)
2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2ndEdition, Green Tea Press, 2015. (http://greenteapress.com/thinkpython2/thinkpython2.pdf) (Chapters 15, 16, 17) (Download pdf files from the above links).

Reference Books:

1. Charles Dierbach, "Introduction to Computer Science Using Python", 1st Edition,Wiley India Pvt Ltd. ISBN-13: 978-8126556014
2. Mark Lutz, "Programming Python", 4th Edition, O'Reilly Media, 2005.ISBN-13:978-9350232873
3. Wesley J Chun, "Core Python Applications Programming", 3rd Edition, Pearson Education India, 2015. ISBN-13: 978-9332555365
4. Roberto Tamassia, Michael H Goldwasser, Michael T Goodrich, "Data Structures and Algorithms in Python",1stEdition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126562176
5. Reema Thareja, "Python Programming using problem solving approach", Oxford university press, 2017

[Prof. C. V Shanmuka Swamy]
Staff Incharge

[Prof. C. V Shanmuka Swamy]
Head, Dept of CSE

[Dr. Narendra Viswanath]
Principal

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
LECTURE PLAN

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	**PYTHON APPLICATION PROGRAMMING**	**STAFF NAME**	**Prof. C. V. Shanmuka swamy**
SUBJECT CODE	**17CS664**	**SEM/SEC**	**VI**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment/quiz/etc)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/2020	Mon	**MODULE 1:** Why should you learn to write programs,	Covered	
2	04/02/2020	Tue	Variables,	covered	
3	05/02/2020	Wed	expressions and statements,	covered	
4	08/02/2020	Sat	expressions and statements continued	Covered	
5	10/02/2020	Mon	expressions and statements continued	Covered	
6	11/02/2020	Tue	Conditional execution,	Covered	
7	12/02/2020	Wed	Conditional execution cont...	Covered	
8	15/02/2020	Sat	Functions in python,	Covered	
9	17/02/2020	Mon	Functions in python cont...,	Covered	
10	18/02/2020	Tue	Functions in python cont...,	covered	
11	19/02/2020	Wed	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM:** 03.02.2020	**TO:** 19.02.2020	
ACTUAL CLASSES TAKEN	**FROM:** 3/2/20	**TO:** 19/2/2020	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** Yes	**IA 2:** —	**IA 3:** —
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** —	**QP DISCUSSION:** Yes
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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	MODULE 2				
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	24/02/2020	Mon	MODULE 2: Iteration in python.	Covered	
13	25/02/2020	Tue	Iteration statements in python cont....	Covered	
14	26/02/2020	Wed	Loop patterns,	Covered	
15	29/02/2020	Sat	Debugging.	Covered	
16	29/02/2020	Sat	Strings in pythos.	Covered	
17	02/03/2020	Mon	String comparison, string methods,	Covered	
18	03/03/2020	Tue	Parsing strings, Format operator, Debugging	Covered	
19	04/03/2020	Wed	Files Persistence, Opening files ,Text files and lines	Covered	
20	07/03/2020	Sat	Using try, except, and open	Covered	
21	09/03/2020	Mon	Writing files, Debugging.	Covered	
22	10/03/2020	Tue	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 24.02.2020	TO: 10.03.2020	
ACTUAL CLASSES TAKEN	FROM: 24/2/20	TO: 10/3/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: Yes (Yes)	IA 2: Yes Yes	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: —	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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	MODULE 3				
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	11/03/2020	Wed	: Lists A list is a sequence , Lists are mutable ,Traversing a list,	Covered	
24	17/03/2020	Tue	List operations, List slices, List methods,	Covered	
25	18/03/2020	Wed	Lists and functions,Lists and strings ,Parsing lines.	Covered	
26	21/03/2020	Sat	Dictionaries as a set of counters,	Covered	
27	23/03/2020	Mon	Dictionaries and files, Looping and dictionaries, Advanced text parsing.	Covered	
28	24/03/2020	Tue	Tuples are immutable, Comparing tuples, Tuple assignment .	Covered	
29	28/03/2020	Sat	Dictionaries and tuples ,Multiple assignment with dictionaries ,The most common words	Covered	
30	28/03/2020	Sat	Regular expressions	Covered	
31	30/03/2020	Mon	Character matching in regular expressions, Extracting data using regular expressions	Covered	
32	31/03/2020	Tue	Combining searching and extracting , Escape character	Covered	
33	01/04/2020	Wed	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 11/03/2020	TO: 01/04/2020	
ACTUAL CLASSES TAKEN	FROM: 11/3/20	TO: 1/4/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: Yes (MJ)	IA 2: Yes	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: —	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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MODULE 4					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	07/04/2020	Tue	: Classes and objects	Covered	
35	08/04/2020	Wed	User-defined types, Rectangles	Covered	
36	15/04/2020	Wed	Copying and Debugging.	Covered	
37	18/04/2020	Sat	Classes and functions	Covered	
38	18/04/2020	Sat	Classes and functions cont....	Covered	
39	20/04/2020	Mon	Modifiers, Debugging.	Covered	
40	21/04/2020	Tue	Classes and methods	Covered	
41	22/04/2020	Wed	Classes and methods cont....	Covered	
42	28/04/2020	Tue	The init method	Covered	
43	29/04/2020	Wed	Polymorphism and Debugging.	Covered	
44	04/05/2020	Mon	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	07/04/2020	TO: 04/05/2020	
ACTUAL CLASSES TAKEN	FROM: 7/4/20	TO: 4/5/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: —	IA 2: Yes	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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MODULE 5

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	05/05/2020	Tue	: Networked programs.	Covered	
46	06/05/2020	Wed	Networked programs cont…	Covered	
47	09/05/2020	Sat	Networked programs cont…	Covered	
48	11/05/2020	Mon	Using Web Services	Covered	
49	12/05/2020	Tue	Parsing XML ,Looping through nodes	Covered	
50	13/05/2020	Wed	Application Programming Interfaces ,Google geo coding web service , Security and API usage	Covered	
51	18/05/2020	Mon	Using databases and SQL	Covered	
52	19/05/2020	Tue	Using databases and SQL cont…	Covered	
53	20/05/2020	Wed	Programming with multiple tables	Covered	
54	23/05/2020	Sat	Three kinds of keys ,Using JOIN to retrieve data .	Covered	
55	30/05/2020	Sat	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 05/05/2020	TO: 30/05/2020	
ACTUAL CLASSES TAKEN	FROM: 5/5/20	TO: 30/5/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: —	IA 2: —	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: —	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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EVEN 19-20

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACRO SCHEDULE

COURSE	C PROGRAMMING FOR PROBLEM SOLVING	STAFF NAME	Prof. C. V. Shanmuka swamy
COURSE CODE	18CPS23	SEM/SEC	2nd Sem – 'A' Section
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes [CO's]

The student will be able to :

CO1: Illustrate simple algorithms from the different domains such as mathematics, physics, etc.

CO2: Construct a programming solution to the given problem using C.

CO3: Identify and correct the syntax and logical errors in C programs.

CO4: Modularize the given problem using functions and structures.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	03.02.2020 to 18.02.2020	**Module- 1:** Introduction to computer Hardware and software, Computer generations, computer ypes, bits, bytes and words.CPU, Primary memory, Secondary memory Ports and connections, Input devices, output device Computers in a network, Network hardware Software basics, software types, Overview of C: Basic structure of C program, Executing a C program, Constant, variable and data types, Operators and expressions-Arithmetic & relational operators, Logical & Bitwise operators ,Operators Precedence table ,Conversion of regular Expressions to C expressions, Simple C programs on bitwise operators, Special operators – size of, &,* etc, Incrementing and decrementing operators **No. of Contact Sessions: 15**	https://nptel.ac.in/courses https://www.youtube.com/watch?v=f9WKOsRB63Q https://www.youtube.com/watch?v=L2untaK7F10 https://www.youtube.com/watch?v=TZ_FqbHqOk https://www.youtube.com/watch?v=n4EG4RXwyU https://www.youtube.com/watch?v=IuTlxP4YDMk https://www.youtube.com/watch?v=xtkcKq1s_rw
2	19.02.2020 to 05.03.2020	**Module -2** Managing Input and output operations ,Conditional Branching and Loops , Simple If statement, if ..Else, Nested if ..else, else ..if Ladder, Example program with if statements Loops, For loop Example programs ,For loop example Programs While loop Example programs, Do while loop Example programs, Finding roots of a quadratic equation, Computation of binomial coefficients, Plotting of Pascal's triangle **No. of Contact Sessions: 15**	https://www.youtube.com/watch?v=HbDnW7Ai6_I https://www.youtube.com/watch?v=9gRJdDC-mtg https://www.youtube.com/watch?v=dUEHD8RuLDQ https://www.youtube.com/watch?v=RHU_7mYOfY&list=PLuHbTVwlLLIaI5R2HbzmtH7uQmnP_3B9s&index=2

3	09.03.2020 to 26.03.2020	**Module -3:** Arrays (1-D, 2-D), Example program on 1-D arrays Character arrays and Strings, Program on character arrays, string functions, Basic Algorithms, Searching -Linear search, Binary search, Sorting Algorithms Bubble sort Selection sort, Program to generate Fibonacci nu, Program to find sum of two matrices, Numbers, Program to multiply two matrices, Program to check a matrix is symmetric or not , transpose of a matrix **No. of Contact Sessions: 15**	https://www.youtube.com/watch?v=CATsie6bnfI https://www.youtube.com/watch?v=K4qXMUJiABI https://www.youtube.com/watch?v=BHEnFvbTrik
4	30.03.2020 to 21.04.2020	**Module -4** User Defined Functions Types of functions, Functions with parameters No return values, Recursion, Example programs Finding Factorial of a positive integers, Fibonacci series **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=JonkNeBBnM https://www.youtube.com/watch?v=AJvCmgt1UU8 https://www.youtube.com/watch?v=tUaDbLdBkU https://www.youtube.com/watch?v=1wwwEJbcMw
5	22.04.2020 to 11.05.2020	**Module -5** Structures , Program on student structure and employee structure ,Example programs, Pointers ,Preprocessor Directives, Example programs **No. of Contact Sessions: 13**	https://www.youtube.com/watch?v=kD0d7AreXg1w https://www.youtube.com/watch?v=Z_fbXmOgYiY

TEXT BOOKS:

1. E. Balaguruswamy, Programming in ANSI C, 7th Edition, Tata McGraw-Hill
2. Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language, Prentice Hall ofIndia

REFERENCE BOOKS:

1. Sumitabha Das, Computer Fundamentals & C Programming, Mc Graw Hill Education.
2. Gary J Bronson, ANSI C Programming, 4th Edition, Cenage Learning.
3. Vikas Gupta: Computer Concepts and C Programming, Dreamtech Press 2013.
4. R S Bichkar, Programming with C, University Press, 2012.
5. V Rajaraman: Computer Programming in C, PHI, 2013.
6. Basavaraj S. Anami, Shanmukhappa A Angadi, Sunilkumar S. Manvi, Computer Concepts and C Programming: A Holistic Approach to Learning C, Second edition, PHI India, 2010.

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Shridevi Institute of Engineering and Technology-Tumkur
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

COURSE	**C PROGRAMMING FOR PROBLEM SOLVING**	**STAFF NAME**	**Prof. C. V. Shanmuka swamy**
COURSE CODE	**18CPS23**	**SEM/SEC**	**2nd Sem – 'A' Section**
IA Marks (CIE)	**40** (Average of three tests for 30 marks and 10 marks for assignment/quiz/etc)	**Maximum Exam Marks (SEE)**	**60** (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/2020	Mon	Introduction to computer Hardware and software	Covered	
2	04/02/2020	Tue	Computer generations, computer ypes, bits, bytes and words.	Covered	
3	05/02/2020	Wed	CPU, Primary memory, Secondary memory.	Covered	
4	06/02/2020	Thur	Ports and connections. Input devices, output device	Covered	
5	07/02/2020	Fri	Computers in a network, Network hardware.	Covered	
6	10/02/2020	Mon	Software basics, software types.	Covered	
7	11/02/2020	Tue	Overview of C: Basic structure of C program.	Covered	
8	12/02/2020	Wed	Executing a C program.	Covered	
9	13/02/2020	Thur	Constant, variable and data types	Covered	
10	14/02/2020	Fri	Operators and expressions-Arithmetic & relational operators	Covered	
11	17/02/2020	Mon	Logical & Bitwise operators	Covered	
12	18/02/2020	Tue	Operators Precendence table ,Conversion of regular Expressions to C expressions	Covered	
13	19/02/2020	Wed	Simple C programs on bitwise operators	Covered	
14	20/02/2020	Thur	Special operators – size of, &,* etc.	Covered	
15	24/02/2020	Mon	Incrementing and decrementing operators	Covered	

SUMMARY

PLANNED DATE	**FROM: 03.02.2020**	**TO: 24.02.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 3/2/20	**TO:** 24/2/20	
NUMBER OF CLASSES	**ALLOCATED: 15**	**TAKEN:** 15	
CONTENT COVERED FOR IA	**IA 1:** Yes	**IA 2:** —	**IA 3:** —
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** —	**QP DISCUSSION:** Yes
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE 2					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
16	25/02/2020	Tue	Managing Input and output operations.	Covered	
17	26/02/2020	Wed	Conditional Branching and Loops	Covered	
18	27/02/2020	Thur	Simple If statement, if ..Else,	Covered	
19	28/02/2020	Fri	Nested if ..else, else ..if Ladder	Covered	
20	02/03/2020	Mon	Example program with if statements	Covered	
21	03/03/2020	Tue	Loops	Covered	
22	04/03/2020	Wed	For loop Example programs	Covered	
23	05/03/2020	Thur	For loop example Programs	Covered	
24	06/03/2020	Fri	While loop Example programs	Covered	
25	09/03/2020	Mon	Do while loop Example programs	Covered	
26	10/03/2020	Tue	Finding roots of a quadratic equation	Covered	
27	11/03/2020	Wed	Computation of binomial coefficients,	Covered	
28	12/03/2020	Thur	Plotting of Pascal's triangle	covered	
29	16/03/2020	Mon	Revision Module II	Covered	
30	17/03/2020	Tue	Revision Module II	Covered	

SUMMARY

PLANNED DATE	FROM: 25.02.2020	TO: 17.03.2020	
ACTUAL CLASSES TAKEN	FROM: 25/2/2020	TO: 17/3/20	
NUMBER OF CLASSES	ALLOCATED: 15	TAKEN: 15	
CONTENT COVERED FOR IA	IA 1: Yes (1 & 2)	IA 2: Yes 1/2	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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MODULE 3					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	18/03/2020	Wed	Arrays (1-D, 2-D)	Covered	
32	19/03/2020	Thur	Example program on 1-D arrays	Covered	
33	20/03/2020	Fri	Arrays (1-D, 2-D) contd.,	Covered	
34	23/03/2020	Mon	Example program on 2-D arrays	Covered	
35	24/03/2020	Tue	Character arrays and Strings	Covered	
36	26/03/2020	Thur	Program on character arrays, string functions	Covered	
37	27/03/2020	Fri	Basic Algorithms	Covered	
38	30/03/2020	Mon	Searching -Linear search	Covered	
39	31/03/2020	Tue	Binary search,	Covered	
40	01/04/2020	Wed	Sorting Algorithms Bubble sort Selection sort	Covered	
41	02/04/2020	Thur	Program to generate Fibonacci numbers	Covered	
42	07/04/2020	Tue	Program to find sum of two matrices	Covered	
43	08/04/2020	Wed	Program to multiply two matrices	Covered	
44	09/04/2020	Thur	Program to check a matrix is symmetric or not , transpose of a matrix	Covered	
45	15/04/2020	Wed	Revision Module III	Covered	

SUMMARY

PLANNED DATE	FROM: 18.03.2020	TO: 15.04.2020	
ACTUAL CLASSES TAKEN	FROM: 18/3/20	TO: 15/4/20	
NUMBER OF CLASSES	ALLOCATED: 15	TAKEN: 15	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: Yes	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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MODULE 4					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
46	16/04/2020	Mon	User Defined Functions	Covered	
47	17/04/2020	Tue	User Defined Functions Contd.,	Covered	
48	20/04/2020	Mon	Types of functions	Covered	
49	21/04/2020	Tue	Functions with parameters No return values	Covered	
50	22/04/2020	Wed	Functions with parameters with return values	Covered	
51	28/04/2020	Tue	Functions with No parameters No return values Functions with No parameters with return values	Covered	
52	29/04/2020	Wed	Recursion.	Covered	
53	30/04/2020	Thur	Example programs	Covered	
54	04/05/2020	Mon	Finding Factorial of a positive integers	Covered	
55	05/05/2020	Tue	Fibonacci series.	Covered	
56	06/05/2020	Wed	Revision Module IV	Covered	
57	07/05/2020	Thur	Solutions to Previous year Question Paper	Covered	

SUMMARY

PLANNED DATE	FROM: 16.04.2020	TO: 07.05.2020	
ACTUAL CLASSES TAKEN	FROM: 16/4/20	TO: 07/5/20	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: —	IA 2: —	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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MODULE 5

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
58	08/05/2020	Fri	Structure	Covered	
59	11/05/2020	Mon	Structure Contd.,	Covered	
60	12/05/2020	Tue	Program on student structure and employee structure	Covered	
61	13/05/2020	Wed	Example programs	Covered	
62	14/05/2020	Thur	Pointers	Covered	
63	15/05/2020	Fri	Pointers Contd.,	Covered	
64	18/05/2020	Mon	Pointers Contd.,	Covered	
65	19/05/2020	Tue	Preprocessor Directives	Covered	
66	20/05/2020	Wed	Example programs	Covered	
67	21/05/2020	Thur	Revision Module V	Covered	
68	22/05/2020	Fri	Solutions to Previous year Question Paper	Covered	
69	29/05/2020	Fri	Model Question Paper Discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 08.05.2020	TO: 29.05.2020	
ACTUAL CLASSES TAKEN	FROM: 8/5/20	TO: 29/5/20	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: —	IA 2: —	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACRO SCHEDULE

EVEN 19-20

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	15CS82	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Master the concepts of HDFS and MapReduce framework
- Investigate Hadoop related tools for Big Data Analytics and perform basic Hadoop Administration
- Recognize the role of Business Intelligence, Data warehousing and Visualization in decision making
- Infer the importance of core data mining techniques for data analytics
- Compare and contrast different Text Mining Techniques

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	3.02.2020 to 18.02.2020	**Module-1:** Hadoop Distributed File System Basics, Running Example Programs and Benchmarks, Hadoop MapReduce Framework, MapReduce Programming **No. of Contact Sessions: 14**	https://www.youtube.com/results?search_query=Hadoop+Distributed+File+System+Basics%2C+Running+Example+Programs+and+10+Hours+Benchmarks%2C+Hadoop+MapReduce+Framework%2C+MapReduce+Programming
2	19.02.2020 to 10.03.2020	**Module-2** Essential Hadoop Tools, Hadoop YARN Applications, Managing Hadoop with Apache Ambari, Basic Hadoop Administration Procedures **No. of Contact Sessions: 14**	https://www.youtube.com/results?search_query=Essential+Hadoop+Tools%2C+Hadoop+YARN+Applications%2C+Managing+Hadoop+with+Apache+Ambari%2C+Basic+Hadoop+Administration+Procedures
3	10.03.2020 to 01.04.2020	**Module -3:** Business Intelligence Concepts and Application, Data Warehousing, Data Mining, Data Visualization **No. of Contact Sessions: 14**	https://www.youtube.com/results?search_query=Business+Intelligence+Concepts+and+Applicati

			on%2C+Data+Warehousing%2C+Data+Mining%2C+Data+Visualization
4	07.04.2020 to 04.05.2020	**Module -4** Decision Trees, Regression, Artificial Neural Networks, Cluster Analysis, Association Rule Mining **No. of Contact Sessions: 14**	https://www.youtube.com/results?search_query=Decision+Trees%2C+Regression%2C+Artificial+Neural+Network%2C+Cluster+Analysis%2C+Association+Rule+Mining
5	05.05.2020 to 01.06.2020	**Module -5** Text Mining, Naïve-Bayes Analysis, Support Vector Machines, Web Mining, Social Network Analysis. **No. of Contact Sessions: 15**	https://www.youtube.com/results?search_query=Text+Mining%2C+Naïve-Bayes+Analysis%2C+Support+Vector+Machine%2C+Web+Mining%2C+Social+Network+Analysis

TEXT BOOKS:

Text Books:

1. Douglas Eadline,"**Hadoop 2 Quick-Start Guide: Learn the Essentials of Big Data Computing in the Apache Hadoop 2 Ecosystem**", 1st Edition, Pearson Education, 2016. ISBN-13: 978-9332570351

2. Anil Maheshwari, "**Data Analytics**", 1st Edition, McGraw Hill Education, 2017. ISBN-13: 978-9352604180

REFERENCE BOOKS:

1) Tom White, "**Hadoop: The Definitive Guide**", 4 Edition, O'Reilly Media.

2) Boris Lublinsky, Kevin T.Smith, Alexey Yakubovich."**Professional Hadoop Solutions**", 1 st Edition, Wrox Press, 2014ISBN-13: 978-8126551071

3) Eric Sammer,"**Hadoop Operations: A Guide for Developers and Administrators**",1st Edition, O'Reilly Media, 2012.ISBN-13: 978-9350239261

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	15CS82	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/20	MON	**Module-1:** Hadoop Distributed File System Basics.	Completed	
2	03/02/20	MON	Hadoop Distributed File System Basics.	Completed	
3	04/02/20	TUE	Hadoop Distributed File System Basics.	Completed	
4	04/02/20	TUE	Hadoop Distributed File System Basics.	Completed	
5	05/02/20	WED	Hadoop Distributed File System Basics.	Completed	
6	10/02/20	MON	Running Example Programs and Benchmarks.	Completed	
7	10/02/20	MON	Running Example Programs and Benchmarks.	Completed	
8	11/02/20	TUE	Running Example Programs and Benchmarks	Completed	
9	11/02/20	TUE	Hadoop MapReduce Framework	Completed	
10	12/02/20	WED	Hadoop MapReduce Framework	Completed	
11	17/02/20	MON	Hadoop MapReduce Framework	Completed	
12	17/02/20	MON	MapReduce Programming	Completed	
13	18/02/20	TUE	MapReduce Programming	Completed	
14	18/02/20	TUE	MapReduce Programming	Completed	

SUMMARY

PLANNED DATE	FROM: 3.02.2020	TO: 18.02.2020
ACTUAL CLASSES TAKEN	FROM: 3/2/20	TO: 18/2/20

NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
15	19/02/20	WED	**Module-2** Essential Hadoop Tools	Completed	
16	24/02/20	MON	Essential Hadoop Tools	Completed	
17	24/02/20	MON	Essential Hadoop Tools	Completed	
18	25/02/20	TUE	Essential Hadoop Tools	Completed	
19	25/02/20	TUE	Hadoop YARN Applications	Completed	
20	26/02/20	WED	Hadoop YARN Applications	Completed	
21	02/03/20	MON	Hadoop YARN Applications	Completed	
22	02/03/20	MON	Hadoop YARN Applications	Completed	
23	03/03/20	TUE	Managing Hadoop with Apache Ambari	Completed	
24	03/03/20	TUE	Managing Hadoop with Apache Ambari	Completed	
25	04/03/20	WED	Managing Hadoop with Apache Ambari	Completed	
26	09/03/20	MON	Basic Hadoop Administration Procedures	Completed	
27	09/03/20	MON	Basic Hadoop Administration Procedures	Completed	
28	10/03/20	TUE	Basic Hadoop Administration Procedures	Completed	

SUMMARY

PLANNED DATES	FROM: 19.02.2020	TO: 10.03.2020	
ACTUAL CLASSES TAKEN	FROM: 19/2/20	TO: 10/3/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:

VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
29	10/03/20	TUE	**Module-3:** Business Intelligence Concepts and Application	Completed	
30	11/03/20	WED	Business Intelligence Concepts and Application	Completed	
31	17/03/20	TUE	Business Intelligence Concepts and Application	Completed	
32	17/03/20	TUE	Business Intelligence Concepts and Application	Completed	
33	18/03/20	WED	Business Intelligence Concepts and Application	Completed	
34	23/03/20	MON	Data Warehousing.	Completed	
35	23/03/20	MON	Data Warehousing.	Completed	
36	24/03/20	TUE	Data Warehousing.	Completed	
37	24/03/20	TUE	Data Warehousing.	Completed	
38	30/03/20	MON	Data Mining.	Completed	
39	30/03/20	MON	Data Mining.	Completed	
40	31/03/20	TUE	Data Visualization	Completed	
41	31/03/20	TUE	Data Visualization	Completed	
42	01/04/20	WED	Data Visualization	Completed	

SUMMARY

PLANNED DATE	FROM: 10.03.2020	TO:01.04.2020	
ACTUAL CLASSES TAKEN	FROM: 10/2/20	TO: 1/4/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
43	07/04/20	TUE	Module-4: Decision Trees	Covered	
44	07/04/20	TUE	Decision Trees	Covered	
45	07/04/20	TUE	Decision Trees	Covered	
46	15/04/20	WED	Decision Trees	Covered	
47	20/04/20	MON	Regression	Covered	
48	20/04/20	MON	Regression	Covered	
49	21/04/20	TUE	Regression	Covered	
50	21/04/20	TUE	Artificial Neural Networks	Covered	
51	22/04/20	WED	Artificial Neural Networks	Covered	

52	28/04/20	TUE	Artificial Neural Networks	Covered	
53	28/04/20	TUE	Cluster Analysis	Covered	
54	29/04/20	WED	Cluster Analysis	Covered	
55	04/05/20	MON	Association Rule Mining	Covered	
56	04/05/20	MON	Association Rule Mining	Covered	

SUMMARY

PLANNED DATE	FROM:07.04.2020	TO: 04.05.2020	
ACTUAL CLASSES TAKEN	FROM: 7/4/20	TO: 4/5/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT GIVEN FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
57	05/05/20	TUE	Module-5: Text Mining	Covered	
58	05/05/20	TUE	Text Mining	Covered	
59	06/05/20	WED	Text Mining	Covered	
60	11/05/20	MON	Naïve-Bayes Analysis	Covered	
61	11/05/20	MON	Naïve-Bayes Analysis	Covered	
62	12/05/20	TUE	Naïve-Bayes Analysis	Covered	

63	[illegible]	Support Vector Machines	Covered	
64	[illegible]	Support Vector Machines	Covered	
65	[illegible]	Support Vector Machines	Covered	
66	[illegible]	Web Mining	Covered	
67	[illegible]	Web Mining	Covered	
68	[illegible]	Web Mining	Covered	
69	[illegible]	Social Network Analysis	Covered	
70	[illegible]	Social Network Analysis	Covered	
71	[illegible]	Social Network Analysis	Covered	

SUMMARY

PLANNED	FROM: 05.04.2020	TO: 01.06.2020	
ACTUAL CONDUCTION TAKEN	FROM: 5/4/20	TO: 1/6/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE SUBJECT	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB–JUNE 2020) MACRO SCHEDULE

SUBJECT	COMPUTER GRAPHICS AND VISUALIZATION	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	17CS62	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Co

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate transformations on both 2D and 3D objects.
- Apply clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	3.02.2020 to 18.02.2020	**-1: Overview: Computer Graphics and OpenGL:** ter Graphics:Basics of computer graphics, tion of Computer Graphics, Video Display Devices: Scan and Raster Scan displays, color CRT s, Flat panel displays, Raster-scan systems: video , color scan Display processor, graphics ions and viewing systems, Input devices, graphics s, graphics on the internet, graphics software. L: Introduction to OpenGL, coordinate reference specifying two-dimensional world coordinate w frames in OpenGL, OpenGL point functions, line functions, point attributes, line attributes, ibutes, OpenGL point attribute functions, OpenGL ribute functions, Line drawing algorithms(DDA, nam's), circle generation algorithms (Bresenham's). Contact Sessions: 10	https://www.youtube.com/watch?v=tBUnuFRKKK https://www.youtube.com/watch?v=0HYfbWw6eTg
2	24.02.2020 to 10.03.2020	**-2: Fill-area Primitives, 2D Geometric formations and 2D viewing:** Primitives: Polygon fill-areas, OpenGL polygon functions, fill area attributes, general scan line fill algorithm, OpenGL fill-area attribute functions, ometric transformations: basic 2D Geometric formations, matrix representations and homogeneous ates, inverse transformations, 2DComposite formations, other 2D transformations, raster methods transformations, OpenGL raster	https://www.youtube.com/watch?v=hn_aaxx-EII&list=PLmaGvPnmtwf%2C+2D+Geometric+transformations+and+2D+viewing%3A

		...rmations, OpenGL geometric transformations ...n, 2D viewing: 2D viewing pipeline, OpenGL 2D ...g functions. No. of **Contact Sessions: 10**	
3	**17.03.2020 to 07.04.2020**	Module **-3: Clipping,3D Geometric Transformations, ...and Illumination Models:** ...g: clipping window, normalization and viewport ...rmations, clipping algorithms,2D point clipping, 2D ...lipping algorithms: cohen-sutherland line clipping ...polygon fill area clipping: Sutherland-Hodgeman ... clipping algorithm only.3DGeometric ...rmations: 3D translation, rotation, scaling, ...site 3D transformations, other 3D transformations, ...transformations, OpenGL geometric transformations ...ns. Color Models: Properties of light, color models, ...d CMY color models. Illumination Models: Light ..., basic Illumination models-Ambient light, diffuse ...on, specular and phong model, Corresponding ...L functions. No. of Contact Sessions: 10	http://www.youtube.com/results?search_query=Clipping%2C3D+Geometric+Transformations%2C+Color+and+Illumination+Models
4	**17.04.2020 to 11.05.2020**	Module **-4 3D Viewing and Visible Surface Detection:** ...wing:3D viewing concepts, 3D viewing pipeline, 3D ...g coordinate parameters , Transformation from ...3D viewing coordinates, Projection transformation, ...al projections, perspective projections, The ...transformation and 3D screen coordinates. ...L 3D viewing functions. Visible Surface Detection ...sic Classification of visible surface Detection ...ms, back face detection, depth buffer method and ...visibility detection functions. No. of Contact Sessions: 10	http://www.youtube.com/results?search_query=3D+Viewing+and+Visible+Surface+Detection
5	**12.05.2020 to 01.06.2020**	Module **-5 Input & Interaction, Curves and Computer ...tion:** ...nd Interaction: Input devices, clients and servers, ...Lists, Display Lists and Modelling, Programming ...Driven Input, Menus Picking, Building Interactive ...Animating Interactive programs, Design of ...ve programs, Logic operations Curved surfaces, ...surfaces, OpenGL Quadric-Surface and Cubic-...Functions, Bezier Spline Curves, Bezier surfaces, ...Curves functions,Corresponding openGL functions. No. of Contact Sessions: 10	http://www.youtube.com/results?search_query=Input%26+Interaction%2C+Curves+and+Computer+Animation

TEXT BOOK(S):

1. Donald Hearn & [illegible] Hall: Computer Graphics with OpenGL Version 3rd / 4th Edition, Pearson Education, 2011
2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL, 5th edition, Pearson Education, 2008

REFERENCE BOOK(S):

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Hughes Computer graphics with OpenGL: pearson education
2. Xiang, Plastock: Computer Graphics, shaum's outline series, 2nd edition, TMG.
3. Kelvin Sung, Peter Shirley, Steven Baer : Interactive Computer Graphics, concepts and applications, Cengage Learning
4. M M Raikar, Computer Graphics using OpenGL, Filip learning/Elsevier

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	COMPUTER GRAPHICS AND VISUALIZATION	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	17CS62	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/20	MON	**MODULE-1: Overview: Computer Graphics and OpenGL:** Computer Graphics:Basics of computer graphics, Application of Computer Graphics	Covered	
2	04/02/20	TUE	Video Display Devices: Random Scan and Raster Scan displays, color CRT monitors, Flat panel displays	Covered	
3	07/02/20	FRI	Raster-scan systems: video controller, raster scan Display processor, graphics workstations and viewing systems, Input devices, graphics networks, graphics on the internet, graphics software	Covered	
4	08/02/20	SAT	OpenGL: Introduction to OpenGL ,coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL	Covered	
5	10/02/20	MON	OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions	Covered	
6	11/02/20	TUE	OpenGL line attribute functions,	Covered	
7	14/02/20	FRI	Line drawing algorithms(DDA	Covered	
8	15/02/20	SAT	Line drawing algorithms(DDA	Covered	
9	17/02/20	MON	circle generation algorithms (Bresenham's)	Covered	
10	18/02/20	TUE	circle generation algorithms (Bresenham's)	Covered	

SUMMARY

PLANNED DATE	FROM: 3.02.2020	TO: 18.02.2020	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	24/02/20	MON	**Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas,	Covered	
12	25/02/20	TUE	OpenGL polygon fill area functions, fill area attributes	Covered	
13	28/02/20	FRI	general scan line polygon fill algorithm,	Covered	
14	29/02/20	SAT	OpenGL fill-area attribute functions,	Covered	
15	02/03/20	MON	2DGeometric Transformations: Basic 2D Geometric Transformations	Covered	
16	03/03/20	TUE	matrix representations and homogeneous coordinates,	Covered	
17	06/03/20	FIR	Inverse transformations, 2DComposite transformations,	Covered	
18	07/03/20	SAT	other 2D transformations, raster methods for geometric transformations,	Covered	
19	09/03/20	MON	OpenGL raster transformations,	Covered	
20	10/03/20	TUE	OpenGL geometric transformations function, 2D viewing: 2D viewing pipeline, OpenGL 2D viewing functions.	Covered	

SUMMARY

PLANNED DATE	FROM: 24.02.2020	TO: 10.03.2020
ACTUAL CLASSES	FROM:	TO:

TAKEN			
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	17/03/20	TUE	**Module -3: Clipping,3D Geometric Transformations, Color and Illumination Models:**	Covered	
22	20/03/20	FRI	Clipping: clipping window,	Covered	
23	21/03/20	SAT	normalization and viewport transformations,	Covered	
24	23/03/20	MON	clipping algorithms,2D point clipping,	Covered	
25	24/03/20	TUE	2D line clipping algorithms: cohen-sutherland line clipping only -polygon fill area clipping.	Covered	
26	27/03/20	FRI	Sutherland-Hodgeman polygon clipping algorithm only	Covered	
27	28/03/20	SAT	3DGeometric Transformations: 3D translation, rotation, scaling,composite 3D transformations	Covered	
28	30/03/20	MON	other 3D transformations, affine transformations, OpenGL geometric transformations functions	Covered	
29	31/03/20	TUE	Color Models: Properties of light, color models, RGB and CMY color models, Illumination Models:	Covered	
30	07/04/20	TUE	Light sources, basic illumination models-Ambient light, diffuse reflection, specular and phong model, Corresponding openGL functions	Covered	

SUMMARY

PLANNED DATE	FROM: 17.03.2020	TO:07.04.2020	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	17/04/20	FRI	**3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts,	Covered	
32	18/04/20	SAT	3D viewing pipeline, .	Covered	
33	18/04/20	SAT	3D viewing coordinate parameters	Covered	
34	20/04/20	MON	Transformation from world to viewing coordinates.	Covered	
35	21/04/20	TUE	Projection transformation, orthogonal projections,	Covered	
36	04/05/20	MON	perspective projections,	Covered	
37	05/05/20	TUE	The viewport transformation and 3D screen coordinates.	Covered	
38	08/05/20	FRI	OpenGL 3D viewing functions. Visible Surface Detection Methods:	Covered	
39	09/05/20	SAT	Classification of visible surface Detection algorithms, back face detection	Covered	
40	11/05/20	MON	depth buffer method and OpenGL visibility detection functions	Covered	

SUMMARY

PLANNED DATE	FROM:17.03.2020	TO: 11.05.2020	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	12/05/20	TUE	**Input& interaction, Curves and Computer Animation:** Input and Interaction:	Covered	
42	15/05/20	FRI	Input devices, clients and servers, Display Lists	Covered	
43	16/05/20	SAT	Display Lists and Modelling,	Covered	
44	18/05/20	MON	Programming Event Driven Input,	Covered	
45	19/05/20	TUE	Menus Picking, Building Interactive Models,	Covered	
46	22/05/20	FRI	Animating Interactive programs, Design of Interactive programs	Covered	
47	23/05/20	SAT	Logic operations ,Curved surfaces, quadric surfaces	Covered	
48	29/05/20	FRI	OpenGL Quadric-Surface and Cubic-Surface Functions	Covered	
49	30/05/20	SAT	Bezier Spline Curves,	Covered	
50	01/06/20	MON	Bezier surfaces, OpenGL curve functions, Corresponding openGL functions	Covered	

SUMMARY

PLANNED DATE	FROM: 12.05.2020	TO: 01.06.2020

ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACROSCHEDULE

SUBJECT	OPERATING SYSTEMS	STAFF NAME	VEENA N D
SUBJECT CODE	17CS64	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Demonstrate need for OS and different types of OS
- Discuss suitable techniques for management of different resources
- Illustrate processor, memory, storage and file system commands
- Explain the different concepts of OS in platform of usage through case studies

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	3.02.2020 to 18.02.2020	**Module- 1: Introduction to operating systems, System structures** What operating systems do; Computer System organization; Computer System architecture; Operating System structure; Operating System operations; Process management; Memory management; Storage management; Protection and Security; Distributed system; Special-purpose systems; Computing environments. Operating System Services; User – Operating System interface; System calls; Types of system calls; System programs; Operating system design and implementation; Operating System structure; Virtual machines; Operating System generation; System boot. **Process Management** Process concept; Process scheduling; Operations on processes;Inter process communication **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=8ssoo9vET3M https://www.youtube.com/watch?v=aE2sRmlbwvo&list=PLrjkIqHnn9UtSPxPQW9OcHG3bLwBFv- https://www.youtube.com/watch?v=EAA822WwHv8 https://www.youtube.com/watch?v=tWPw4FGU9I8 https://www.youtube.com/watch?v=Na2-vABWFL4
2	19.02.2020 to 05.03.2020	**Module -2 Multi-threaded Programming** Overview; Multithreading models; Thread Libraries; Threading issues. Process Scheduling: Basic concepts; Scheduling Criteria; Scheduling Algorithms; Multiple-processor scheduling; Thread scheduling. **Process Synchronization:** Synchronization; The critical section problem; Peterson's solution; Synchronization hardware; Semaphores; Classical problems of synchronization; Monitors **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=TZ7VIrfOAb https://www.youtube.com/watch?v=AiVKMGbcFLA&list=PLrjkIqHnn9UtSPxPQW9OcHG3bLwBFv- https://www.youtube.com/watch?v=m8JVVCbcCIs

3	09.03.2020 to 26.03.2020	**Module -3: Deadlocks** Deadlocks: System model: Deadlock characterization: Methods for handling deadlocks: Deadlock prevention: Deadlock avoidance: Deadlock detection and recovery from deadlock. **Memory Management:** Memory management strategies: Background: Swapping: Contiguous memory allocation: Paging: Structure of page table: Segmentation. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Deadlocks%3B+System+model https://www.youtube.com/watch?v=85.nwvZNGg0 https://www.youtube.com/results?search_query=Memory+management+strategies%3A+Background%3B+Swapping%3B+
4	30.03.2020 to 21.04.2020	**Module -4** **Virtual Memory Management**: Background: Demand paging: Copy-on-write: Page replacement: Allocation of frames: Thrashing. **File System, Implementation of File System:** File system: File concept: Access methods: Directory structure: File system mounting: File sharing: Protection: Implementing File system: File system structure: File system implementation: Directory implementation: Allocation methods: Free space management. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=5PbcnIh1Zd0 https://www.youtube.com/watch?v=nBUg_nuF58 https://www.youtube.com/watch?v=BRv93thgHLI https://www.youtube.com/watch?v=2MlnqSwkbMk&list=PLzH6n4fB0.3thKgGGBzLvZnMmYkRDboLC3
5	22.04.2020 to 11.05.2020	**Module -5** **Secondary Storage Structures, Protection:** Mass storage structures: Disk structure: Disk attachment: Disk scheduling: Disk management: Swap space management. Protection: Goals of protection. Principles of protection. Domain of protection. Access matrix, Implementation of access matrix. Access control, Revocation of access rights. Capability- Based systems. **Case Study: The Linux Operating System:** Linux history: Design principles: Kernel modules: Process management: Scheduling: Memory Management: File systems. Input and output: Inter-process communication. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=5cRd3WMiXnE https://www.youtube.com/watch?v=8e9EaIVvMnI https://www.youtube.com/watch?v=B61SnDCpkLI https://www.youtube.com/watch?v=O6GcwnOLgY

TEXT BOOKS:

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Principles 7th edition, Wiley-India, 2006

REFERENCE BOOKS:

1. Ann McHoes Ida M Flynn, Understanding Operating System, Cengage Learning, 6th Edition
2. D.M Dhamdhere, Operating Systems: A Concept Based Approach 3rd Ed, McGraw- Hill, 2013.
3. P.C.P. Bhatt, An Introduction to Operating Systems: Concepts and Practice 4th Edition, PHI(EEE), 2014.
4. William Stallings Operating Systems: Internals and Design Principles, 6th Edition, Pearson.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	OPERATING SYSTEM	STAFF NAME	VEENA N D
SUBJECT CODE	17CS64	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/20	MON	**Introduction to OS, System structures:** What operating systems Does	3/2/20	✓
2	04/02/20	TUE	Computer System architecture; Operating System structure; Operating System operations; Process management	6/2/20	
3	06/02/20	THU	Memory management; Storage management; Protection and security; Distributed system	7/2/20	
4	07/02/20	FRI	Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface.	10/2/20 11/2/20	
5	10/02/20	MON	System calls; Types of system calls; System programs.	14/2/20	
6	11/02/20	TUE	Operating System design and implementation	15/2/20	
7	13/02/20	THU	Operating System structure	17/2/20	
8	14/02/20	FRI	Virtual machines; Operating system generation; System boot.	18/2/20	
9	17/02/20	MON	**Process Management** Process concept; Process scheduling	24/2/20 25/2/20	
10	18/02/20	TUE	Operations on processes; Inter process communication	28/2/20	

SUMMARY

PLANNED DATE	FROM: 3.02.2020 ✓	TO: 18.02.2020 ✓	
ACTUAL CLASSES TAKEN	FROM: 03/02/2020	TO: 28/02/2020 ✓	
NUMBER OF CLASSES	ALLOCATED: 10 ✓	TAKEN: 12 ✓	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	20/02/20	FRI	**Multi-threaded Programming**: Multi-Threaded Programming: Overview.	29/2/20	
12	20/02/20	THU	Multithreading models.	2/3/20	
13	24/02/20	MON	Thread Libraries; threading issues.	3/3/20	
14	25/02/20	TUE	Process Scheduling: Basic concepts; Scheduling criteria.	3/3/20	
15	27/02/20	THU	Scheduling algorithms.	6/3/20	
16	28/02/20	FRI	Multiple-Processor scheduling; Thread scheduling.	9/3/20	
17	02/03/20	MON	**Process Synchronization:** Synchronization basic concepts.	10/3/20	
18	03/03/20	TUE	Critical section problem. Peterson's solution. Synchronization hardware	11/3/20	
19	05/03/20	THU	Semaphores.	11/3/20	
20	06/03/20	FRI	Monitors.	12/3/20	

SUMMARY

PLANNED DATE	FROM: 20.02.2020	TO: 06.03.2020	
ACTUAL CLASSES TAKEN	FROM: 29/2/20	TO: 12/3/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	09/03/20	MON	**DEADLOCKS:** System model; Deadlock characterization	7/4/20	
22	10/03/20	TUE	Methods for handling deadlocks.	11/4/20	
23	12/03/20	THU	Deadlock prevention.	14/4/20	
24	17/03/20	TUE	Deadlock avoidance.	16/4/20	
25	19/03/20	THU	Deadlock detection and recovery from deadlock.	18/4/20	
26	20/03/20	FRI	Deadlocks continued.	21/4/20	
27	23/02/20	MON	**Memory Management:** Memory management strategies: Background; Swapping;	23/4/20	
28	24/02/20	TUE	Contiguous memory allocation; Paging;	25/4/20	
29	26/03/20	THU	Structure of page table;	28/4/20	
30	27/03/20	FRI	Segmentation	30/4/20	

SUMMARY

PLANNED DATE	FROM: 09.03.2020	TO:27.03.2020	
ACTUAL CLASSES TAKEN	FROM: 7/4/20	TO: 30/4/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	30/03/20	MON	**Virtual Memory Management**: Background.	01/5/20	
32	31/03/20	TUE	Demand paging.	5/5/20	
33	02/04/20	THU	Copy-on-write; Page replacement.	7/5/20	
34	09/04/20	THU	Allocation of threads and thrashing.	9/5/20	
35	16/04/20	THU	Implemeenting File System: File system structure.	12/5/20	
36	17/04/20	FRI	File system implementation; Directory implementation.	14/5/20	
37	20/04/20	MON	Allocation methods.	16/5/20	
38	21/04/20	TUE	Allocation methods Contd...	19/5/20	
39	23/04/20	THU	Free space management	21/5/20	
40	28/04/20	TUE	Free space management Contd...	23/5/20	

SUMMARY

PLANNED DATE	FROM: 30.03.2020	TO: 28.04.2020	
ACTUAL CLASSES TAKEN	FROM: 2/5/20	TO: 23/5/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	30/04/20	THU	**Secondary Storage Structures, Protection:** Mass Storage structures; Disk structure.	26/5/20	
42	04/05/20	MON	Disk attachment; Disk scheduling.	27/5/20	
43	05/05/20	TUE	Swap space management.	27/5/20	
44	07/05/20	THU	Protection: Goals of protection.	1/6/20	
45	08/05/20	FRI	Principles of protection, Domain of protection, Access matrix.	2/6/20	
46	11/05/20	MON	Domain of protection, Access matrix.	4/6/20	
47	12/05/20	TUE	Implementation of access matrix.	5/6/20	
48	14/05/20	THU	Access matrix Continued	5/6/20	
49	15/05/20	FRI	Access control.	8/6/20	
50	18/05/20	MON	Revocation of access rights. Capability-Based systems.	9/6/20	

SUMMARY

PLANNED DATE	**FROM: 30.04.2020**	**TO: 18.05.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 26/5/20	**TO:** 9/6/20	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 9	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Shridevi Institute of Engineering and Technology-
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Cover Page: Course Overview
Semester: III Semester **Year:** 2019-20

Course Title: Discrete Mathematical Structures	***Course Code:*** 18CS36
Total contact Hours: 39	***Duration of Exam:*** 03 Hrs.
Total exam marks: 100	***Total I.A. marks:*** 40
Course plan author: Veena N D	***Date:*** 25/07/2019
Checked by: Prof C.V. Shanmukaswamy	***Date:*** 25/07/2019

Prerequisites: Set theory, graphs, concepts of Integers.
Course Objectives: This course will enable students to

- Understand theoretical foundations of computer science to perceive other courses in the programme.
- Illustrate applications of discrete structures: logic, relations, functions, set theory and counting.
- Describe different mathematical proof techniques.
- Illustrate the importance of graph theory in computer science

Course Outcomes:
The student should be able to

- Use propositional and predicate logic in knowledge representation and truth verification.
- Demonstrate the application of discrete structures in different fields of computer science.
- Solve problems using recurrence relations and generating functions.
- Application of different mathematical proofs techniques in proving theorems in the courses.
- Compare graphs, trees and their applications.

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE PLAN

Name of the Staff: Mrs. VEENA N D
Course Code: 18CS36
Course Name: Discrete mathematical Structure
Class: III SEM

Sl. No.	DATE	TOPIC	Topics covered	Remarks
		MODULE-1		
01	26/07/2019	**Fundamentals of Logic**: Basic Connectives	✓	
02	29/07/2019	Truth Tables	✓	
03	30/07/2019	Logic Equivalence	✓	
04	31/07/2019	Logic Equivalence contd..	✓	
05	02/08/2019	The Laws of Logic.	✓	
06	05/08/2019	The Laws of Logic contd..	✓	
07	06/08/2019	Logical Implication – Rules of Inference.	✓	
08	07/08/2019	Logical Implication – Rules of Inference. Contd....	✓	
09	09/08/2019	The Use of Quantifiers, Quantifiers	✓	
10	13/08/2019	Definitions and Proofs of theorem.	✓	
		MODULE-2		
11	14/08/2019	**Properties of the Integers**	✓	
12	16/08/2019	Mathematical Induction	✓	
13	19/08/2019	Mathematical Induction examples	✓	
14	20/08/2019	The Well Ordering Principle Mathematical Induction	✓	
15	21/08/2019	mathematical induction contd....	✓	
16	23/08/2019	Recursive Definitions	✓	
17	26/08/2019	**Fundamental Principles of Counting:** The Rules of Sum and Product	✓	
18	27/08/2019	Permutations	✓	
19	28/08/2019	Combinations – The Binomial Theorem	✓	
20	30/08/2019	Combinations with Repetition	✓	
		MODULE-3		
21	03/09/2019	**Relations&Functions** Cartesian Products of Relations	✓	
22	04/09/2019	Functions – Plain and One-to-One, Onto Functions	✓	
23	09/09/2019	The Pigeon-hole Principle	✓	
24	11/09/2019	Function Composition and Inverse Functions	✓	
25	13/09/2019	Properties of relations	✓	
26	16/09/2019	Computer Recognition	✓	
27	17/09/2019	Zero-One Matrices	✓	
28	18/09/2019	Directed Graphs	✓	
29	20/09/2019	Partial Orders – Hasse Diagrams	✓	
30	23/09/2019	Equivalence Relations, Partitions	✓	
		MODULE-4		
31	24/09/2019	**The Principle of Inclusion and Exclusion**: The Principle of Inclusion and Exclusion	✓	
32	25/09/2019	Generalizations of the Principle	✓	

33	27/09/2019	Generalizations of the Principle contd...	✓	
34	30/09/2019	Derangements : Nothing is in its Right Place	✓	
35	01/10/2019	Rook Polynomials	✓	
36	04/10/2019	Rook Polynomials contd...	✓	
37	09/10/2019	**Recurrence Relations:** First Order Linear Recurrence Relation	✓	
38	11/10/2019	First Order Linear Recurrence Relation contd...	✓	
39	18/10/2019	The Second Order Linear Homogeneous Recurrence Relation with Constant Coefficients	✓	
40	21/10/2019	The Second Order Linear Homogeneous Recurrence Relation with Constant Coefficients contd....	✓	
		MODULE-5		
41	22/10/2019	**Introduction to Graph Theory**: Definitions and Example	✓	
42	23/10/2019	Sub graphs	✓	
43	25/10/2019	Complements	✓	
44	28/10/2019	Graph Isomorphism	✓	
45	30/10/2019	Vertex Degree	✓	
46	04/11/2019	Euler Trails and Circuits	✓	
47	05/11/2019	**Trees**: Definitions	✓	
48	06/11/2019	Properties and Examples	✓	
49	08/11/2019	Rooted Trees, Trees and Sorting	✓	
50	11/11/2019	Weighted Trees, Prefix Codes	✓	
51	12/11/2019	Revision	✓	
52	13/11/2019	Revision	✓	
53	18/11/2019	Revision	✓	
54	19/11/2019	Revision	✓	
55	20/11/2019	Revision	✓	
56	25/11/2019	Revision	✓	
57	26/11/2019	Question paper discussion	✓	
58	27/11/2019	Question paper discussion	✓	
59	29/11/2019	Question paper discussion	✓	

Text Books:

1. Ralph P. Grimaldi: Discrete and Combinatorial Mathematics, 5th Edition, Pearson Education, 2004. **Ch 2, Ch 4: 4.1, 4.2, Ch 5:5.1 to 5.3, 5.5, 5.6, Ch 7:7.1 to 7.4, Ch 8: 8.1 to 8.4, Ch 10:10.1 to 10.2, Ch 11: 11.1 to 11.3, Ch 12: 12.1 to 12.4.**

Reference Books:

1. Basavaraj S Anami and Venkanna S Madalli: Discrete Mathematics – A Concept based approach, Universities Press, 2016
2. Kenneth H. Rosen: Discrete Mathematics and its Applications, 6th Edition, McGraw Hill.
3. Jayant Ganguly: A Treatise on Discrete Mathematical Structures, Sanguine-Pearson, 2010.
4. D.S. Malik and M.K. Sen: Discrete Mathematical Structures: Theory and Applications, Thomson, 2004.
5. Thomas Koshy: Discrete Mathematics with Applications, Elsevier, 2005, Reprint 2008.

[Mrs.Veena N D]
Staff Incharge

[Prof.C.Shanmuka Swamy]
Head, Dept of CSE

[Dr. T.Hemadri Naidu]
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TUMKUR - 572106

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACROSCHEDULE

SUBJECT	OPERATIONS RESEARCH	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	17CS653	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

CO1: Explain Optimization techniques for various problems.
CO2: Understand the given problem as transportation and assignment problem and solve.
CO3: Illustrate game theory for decision support system.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	04.02.2020 to 26.02.2020	**Module- 1** **Introduction, Linear Programming:** Introduction: The origin, nature and impact of OR; Defining the problem and gathering data; Formulating a mathematical model; Deriving solutions from the model; Testing the model; Preparing to apply the model; Implementation . **Introduction to Linear Programming Problem (LPP):** Prototype example, Assumptions of LPP, Formulation of LPP and Graphical method various examples. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=PnDWJ_gA20U https://www.youtube.com/watch?v=ad2pnDIkdYw&list=PLjz8nfjpg1B0Lu0E0gL03gCHZVcNtuA https://www.youtube.com/watch?v=gnbSUBDWIuA&list=PLjz8nfjpg1B0Lu0E0gL03gCHZVcNtuA3&index=2 https://www.youtube.com/watch?v=AEAIpOtvr0o&list=PLjz8nfjpg1B0Lu0E0gL03gCHZVcNtuA3&index=3
2.	28.02.2020 to 18.03.2020	**Module -2** **Simplex Method – 1:** The essence of the simplex method; Setting up the simplex method; Types of variables, Algebra of the simplex method; the simplex method in tabular form; Tie breaking in the simplex method, Big M method, Two phase method. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=qdxJv3_dNo4&list=PLjz8nfjpg1B0Lu0E0gL03gCHZVcNtuA3&index=4 https://www.youtube.com/watch?v=adGiehwXMDw&list=PLjz8nfjpg1B0Lu0E0gL03gCHZVcNtuA3&index=5 https://www.youtube.com/watch?v=vLBFC5Lm9DE&list=PLjz8nfjpg1B0Lu0E0gL03gCHZVcNtuA3&index=6 https://www.youtube.com/watch?v=1fdbeDnbDP4&

3.	20.03.2020 to 08.04.2020	**Module -3** **Simplex Method – 2: Duality Theory** – The essence of duality theory, Primal dual relationship, conversion of primal to dual problem and vice versa. The dual simplex method. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=gm0wUCx5JQ8&list=PLjx8ejfingT1l8LaDEHgLlI3gCHZYcNtsiN&index=7 https://www.youtube.com/watch?v=zilH5kU0bAmg&list=PLjx8ejfingT1l8LaDEHgLlI3gCHZYcNtsiN&index=9 https://www.youtube.com/watch?v=vplPIYJwWkNU
4.	15.04.2020 to 08.05.2020	**Module -4** **Transportation and Assignment Problems:** The transportation problem, Initial Basic Feasible Solution (IBFS) by North West Corner Rule method, Matrix Minima Method, Vogel's Approximation Method. Optimal solution by Modified Distribution Method (MODI). The Assignment problem; A Hungarian algorithm for the assignment problem. Minimization and Maximization varieties in transportation and assignment problems. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=GUIdvIXnfo8&list=PLjx8ejfingT1l8LaDEHgLlI3gCHZYcNtsiN&index=13 https://www.youtube.com/watch?v=8eAnHwdmU&list=PLjx8ejfingT1l8LaDEHgLlI3gCHZYcNtsiN&index=14 https://www.youtube.com/watch?v=L8ka9U0rn8A&list=PLjx8ejfingT1l8LaDEHgLlI3gCHZYcNtsiN&index=15 https://www.youtube.com/watch?v=hnbz2e-0.84 https://www.youtube.com/watch?v=BlGfzLxcnoI&list=PLjx8ejfingT1l8LaDEHgLlI3gCHZYcNtsiN&index=16

8.	09.05.2020 to 30.05.2020	**Module -5** **Game Theory:** Game Theory: The formulation of two persons, zero sum games; saddle point, maximin and minimax principle, Solving simple games- a prototype example; Games with mixed strategies; Graphical solution procedure. **Metaheuristics:** The nature of Metaheuristics, Tabu Search, Simulated Annealing, Genetic Algorithms. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=0Mb9bg93Ao https://www.youtube.com/watch?v=07w3Bt4x3Ak https://www.youtube.com/watch?v=Bwz6kJ_55Ys&list=PLgBfufjbnrEBKxdHHaLRJqLBGJxNbnSAb&index=22 https://www.youtube.com/watch?v=EsBgCzdDAf0 https://www.youtube.com/watch?v=Z_85faFz3M04

TEXT BOOKS:

1. D.S. Hira and P.K. Gupta, Operations Research, (Revised Edition), Published by S Chand & Company Ltd, 2014

REFERENCE BOOKS:

1. S Kalavathy, Operation Research, Vikas Publishing House Pvt Limited, 01-Aug-2002
2. S D Sharma, Operation Research, Kedar Nath Ram Nath Publishers.

Mr. Chethan M S
Staff Incharge

Prof. C V Shivakumaraswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	OPERATIONS RESEARCH	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	17CS653	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04/02/20	TUE	**Module 1:** **Introduction, Linear Programming:** Introduction: The origin, nature and impact of OR	Covered	
2	05/02/20	WED	Defining the problem and gathering data;	Covered	
3	07/02/20	FRI	Formulating a mathematical model; Deriving solutions from the model;	Covered	
4	08/02/20	SAT	Testing the model; Preparing to apply the model; Implementation.	Covered	
5	11/02/20	TUE	**Introduction to Linear Programming Problem (LPP):** Prototype example, Assumptions of LPP.	Covered	
6	12/02/20	WED	Formulation of LPP various examples	Covered	
7	14/02/20	FRI	Formulation of LPP various examples	Covered	03/3/20
8	15/02/20	SAT	Formulation of LPP various examples	Covered	04/3/20
9	18/02/20	TUE	Graphical method various examples.	Covered	06/3/20
10	19/02/20	WED	Graphical method various examples.	Covered	10/3/20
11	25/02/20	TUE	Graphical method various examples.	Covered	11/3/20
12	26/02/20	WED	Graphical method various examples.	Covered	11/3/20

Additional Classes

SUMMARY

PLANNED DATE	FROM: 04.02.2020	TO: 26.02.2020	
ACTUAL CLASSES TAKEN	FROM: 04/03/20	TO: 11/03/20	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 18	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Sharadadevamma
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	28/02/20	FRI	**Module 2:** **Simplex Method – 1:** The essence of the simplex method;	1/4/20 8/4/20	
14	29/02/20	SAT	Setting up the simplex method; Types of variables,	3/4/20	
15	29/02/20	SAT	Setting up the simplex method; Types of variables,	CBK/4/20	
16	03/03/20	TUE	Algebra of the simplex method; the simplex method in tabular form;	05/4/20	
17	04/03/20	WED	Algebra of the simplex method; the simplex method in tabular form;	04/4/20	
18	06/03/20	FRI	Tie breaking in the simplex method	15/4/20	Correct
19	07/03/20	SAT	Tie breaking in the simplex method	15/4/20	Correction
20	10/03/20	TUE	Big M method	9/4/20	
21	11/03/20	WED	Big M method	10/4/20	Correct in one
22	17/03/20	TUE	Two phase method	10/4/20	
23	18/03/20	WED	Two phase method	13/4/20	

SUMMARY

PLANNED DATE	FROM: 28.02.2020	TO: 18.03.2020	
ACTUAL CLASSES TAKEN	FROM: 1/4/20	TO: 15/4/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Dr. K V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	20/03/20	FRI	**Module 3:** **Duality Theory** - The essence of duality theory	16/4/20	
25	21/03/20	SAT	Primal dual relationship.	17/4/20	Covered in one class
26	24/03/20	TUE	Primal dual relationship.	18/4/20	
27	27/03/20	FRI	Primal dual relationship.	22/4/20	
28	28/03/20	SAT	conversion of primal to dual problem and vice versa	23/4/20	
29	28/03/20	SAT	conversion of primal to dual problem and vice versa	24/4/20	Covered in one class
30	31/03/20	TUE	conversion of primal to dual problem and vice versa	24/4/20	
31	01/04/20	WED	The dual simplex method.	29/4/20	
32	07/04/20	TUE	The dual simplex method.	30/4/20	
33	08/04/20	WED	The dual simplex method.	1/5/20	

SUMMARY

PLANNED DATE	FROM: 20.03.2020	TO:08.04.2020	
ACTUAL CLASSES TAKEN	FROM: 16/4/20	TO: 1/5/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 08	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Prof. C. Ramakaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	15/04/20	WED	**Module 4:** **Transportation and Assignment Problems:** The transportation problem, iterations:,	21/5/20	
35	17/04/20	FRI	Initial Basic Feasible Solution (IBFS) by North West Corner Rule method	22/5/20	Covered in one Class
36	18/04/20	SAT	Matrix Minima Method, Vogel's Approximation Method.	23/5/20	
37	18/04/20	SAT	Optimal solution by Modified Distribution Method (MODI).	26/5/20	
38	21/04/20	TUE	Optimal solution by Modified Distribution Method (MODI)	29/5/20	
39	22/04/20	WED	The Assignment problem	30/5/20	
40	28/04/20	TUE	A Hungarian algorithm for the assignment problem.	2/6/20	
41	29/04/20	WED	A Hungarian algorithm for the assignment problem.	5/6/20	
42	05/05/20	TUE	Minimization and Maximization varieties in transportation and assignment problems	6/6/20	
43	06/05/20	WED	Minimization and Maximization varieties in transportation and assignment problems	9/6/20	Covered in one Class
44	08/05/20	FRI	Minimization and Maximization varieties in transportation and assignment problems	9/6/20	

SUMMARY

PLANNED DATE	FROM: 15.04.2020	TO: 08.05.2020	
ACTUAL CLASSES TAKEN	FROM: 21/5/20	TO: 9/6/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Prof. C. V. Sreenivasaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	09/05/20	SAT	**Module 5:** **Game Theory:** Game Theory: The formulation of two persons	1/5/20	
46	12/05/20	TUE	zero sum games; saddle point, maximin and minimax principle.	6/5/20	
47	13/05/20	WED	Solving simple games- a prototype example.	7/5/20	
48	15/05/20	FRI	Games with mixed strategies; Graphical solution procedure	8/5/20	
49	16/05/20	SAT	Games with mixed strategies; Graphical solution procedure	13/5/20	
50	19/05/20	TUE	Games with mixed strategies; Graphical solution procedure	14/5/20	
51	20/05/20	WED	**Metaheuristics:** The nature of Metaheuristics	16/5/20	
52	22/05/20	FRI	Tabu Search	20/5/20	Covered in one day
53	23/05/20	SAT	Simulated Annealing, Genetic Algorithms.	20/5/20	
54	29/05/20	FRI	Revision & Question papers Discussion	11/6/20	
55	30/05/20	SAT	Revision & Question papers Discussion	13/6/20	

SUMMARY

PLANNED DATE	FROM: 09.05.2020	TO: 30.05.2020	
ACTUAL CLASSES TAKEN	FROM: 1/5/20	TO: 13/6/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	INTERNET OF THINGS TECHNOLOGY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	15CS81	SEM/SEC	VIII
IA Marks (CIE)	20 (Average of three tests for 15 marks and 05 marks for assignment)	Maximum Exam Marks (SEE)	80 (Question paper will be set and evaluated for 80 marks)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/20	MON	**Module 1:** **Introduction on IoT**, What is IoT	Covered	
2	03/02/20	MON	Genesis of IoT,	Covered	
3	04/02/20	TUE	IoT and Digitization	Covered	
4	04/02/20	TUE	IoT Impact,	Covered	
5	05/02/20	WED	Convergence of IT and IoT,	Covered	
6	10/02/20	MON	IoT Challenges,	Covered	
7	10/02/20	MON	IoT Network Architecture and Design	Covered	
8	11/02/20	TUE	Drivers Behind New Network Architectures,	Covered	
9	11/02/20	TUE	Comparing IoT Architectures,	Covered	
10	12/02/20	WED	A Simplified IoT Architecture,	Covered	
11	17/02/20	MON	The Core IoT Functional Stack,	Covered	17/2/20
12	17/02/20	MON	IoT Data Management and Compute Stack	Covered	17/2/20
13	18/02/20	TUE	IoT Data Management and Compute Stack	Covered	

SUMMARY

PLANNED DATE	FROM: 03.02.2020	TO: 18.02.2020	
ACTUAL CLASSES TAKEN	FROM: 03/02/20	TO: 18/2/20	
NUMBER OF CLASSES	ALLOCATED: 13 ✓	TAKEN: 15 ✓	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ: —	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V [illegible]
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
14	18/02/20	TUE	**Module 2:** Smart Objects	Covered	
15	19/02/20	WED	The "Things" in IoT.	Covered	
16	24/02/20	MON	Sensors.	Covered	
17	24/02/20	MON	Sensors.	Covered	
18	25/02/20	TUE	Actuators.	Covered	09/3/20
19	25/02/20	TUE	Actuators.	Covered	09/3/20
20	26/01/20	WED	Smart Objects.	Covered	
21	02/03/20	MON	Sensor Networks.	Covered	
22	02/03/20	MON	Sensor Networks.	Covered	
23	03/03/20	TUE	Connecting Smart Objects.	Covered	
24	03/03/20	TUE	Communication Criteria.	Covered	
25	04/03/20	WED	Communication Criteria.	Covered	10/3/20
26	09/03/20	MON	IoT Access Technologies	Covered	11/3/20
27	09/03/20	MON	IoT Access Technologies contd...	Covered	11/3/20

Cycle Classes

Cycle Classes

SUMMARY

PLANNED DATE	FROM: 18.02.2020	TO: 09.03.2020	
ACTUAL CLASSES TAKEN	FROM: 18/2/20	TO: 11/3/20	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ: –	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. [illegible]
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Tumkur - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
28	10/03/20	TUE	**Module 3:** IP as the IoT Network Layer.	1/4/20	Covered in one class
29	10/03/20	TUE	IP as the IoT Network Layer contd…	1/4/20	
30	11/03/20	WED	The Business Case for IP.	2/4/20	Covered in one class
31	17/03/20	TUE	The Business Case for IP contd…	2/4/20	
32	17/03/20	TUE	The need for optimization.	3/4/20	Covered in one class
33	18/03/20	WED	The need for optimization contd…	3/4/20	
34	23/03/20	MON	Optimizing IP for IoT.	6/4/20	Covered in one class
35	23/03/20	MON	Profiles and Compliances.	6/4/20	
36	24/03/20	TUE	Application Protocols for IoT.	7/4/20	
37	24/03/20	TUE	Application Protocols for IoT contd…	7/4/20	Covered in one class
38	30/03/20	MON	The Transport Layer.	8/4/20	
39	30/03/20	MON	IoT Application Transport Methods.	9/4/20	Covered in one class
40	31/03/20	TUE	IoT Application Transport Methods contd…	9/4/20	

SUMMARY

PLANNED DATE	FROM: 10.03.2020	TO:31.03.2020	
ACTUAL CLASSES TAKEN	FROM: 1/4/20	TO: 9/4/20	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 07	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	31/03/20	TUE	**Module 4:** Data and Analytics for IoT	15/4/20	
42	01/04/20	WED	An Introduction to Data Analytics for IoT.	16/4/20	
43	07/04/20	TUE	Machine Learning.	18/4/20	Covered in one class
44	07/04/20	TUE	Big Data Analytics Tools and Technology	18/4/20	
45	08/04/20	WED	Edge Streaming Analytics.	20/4/20	
46	15/04/20	WED	Network Analytics.	21/4/20	Covered in one class
47	20/04/20	MON	Securing IoT.	21/4/20	
48	20/04/20	MON	A Brief History of OT Security.	25/4/20	
49	21/04/20	TUE	Common Challenges in OT Security.	25/4/20	Covered in one class
50	21/04/20	TUE	Common Challenges in OT Security.	25/4/20	
51	28/05/20	TUE	How IT and OT Security Practices and Systems Vary	27/4/20	
52	28/04/20	TUE	Formal Risk Analysis Structures: OCTAVE and FAIR.	27/4/20	Covered in one class
53	29/04/20	WED	Formal Risk Analysis Structures: OCTAVE and FAIR.	27/4/20	
54	04/05/20	MON	The Phased Application of Security in an Operational Environment	28/4/20	

SUMMARY

PLANNED DATE	FROM: 31.03.2020	TO: 04.05.2020	
ACTUAL CLASSES TAKEN	FROM: 15/4/20	TO: 28/4/20	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 09	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Prof. C V Sridhar Lakwamy
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
55	04/05/20	MON	Module 5: IoT Physical Devices and Endpoints - Arduino UNO:	30/4/20	Covered in one class
56	05/05/20	TUE	Introduction to Arduino, Arduino UNO,	30/4/20	
57	05/05/20	TUE	Installing the Software, Fundamentals of Arduino Programming.	2/5/20	Covered in one class
58	06/05/20	WED	IoT Physical Devices and Endpoints - RaspberryPi: Introduction to RaspberryPi,	2/5/20	
59	11/05/20	MON	About the RaspberryPi Board: Hardware Layout,	04/5/20	Covered in one class
60	11/05/20	MON	Operating Systems on RaspberryPi,	04/5/20	
61	12/05/20	TUE	Configuring RaspberryPi,	5/5/20	Covered in one class
62	12/05/20	TUE	Programming RaspberryPi with Python,	5/5/20	
63	13/05/20	WED	Wireless Temperature Monitoring System Using Pi, DS18B20 Temperature Sensor,	7/5/20	Covered in one class
64	18/05/20	MON	Connecting Raspberry Pi via SSH, Accessing Temperature from DS18B20 sensors,	9/5/20	
65	18/05/20	MON	Remote access to RaspberryPi, Smart and Connected Cities,	9/5/20	
66	19/05/20	TUE	An IoT Strategy for Smarter Cities, Smart City IoT Architecture,	26/5/20	Covered in one class
67	19/05/20	TUE	Smart City Security Architecture, Smart City Use-Case Examples.	26/5/20	
68	20/05/20	WED	Revision of Modules	8/6/20	

SUMMARY

PLANNED DATE	FROM: 04.05.2020	TO: 20.05.2020	
ACTUAL CLASSES TAKEN	FROM: 30/4/20	TO: 8/6/20	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 07	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Prof. C V Shivakumaraswamy
HOD, ISE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACROSCHEDULE

SUBJECT	INTERNET OF THINGS TECHNOLOGY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	15CS81	SEM/SEC	VIII
IA Marks (CIE)	20 (Average of three tests for 15 marks and 05 marks for assignment)	Maximum Exam Marks (SEE)	80 (Question paper will be set and evaluated for 80 marks)

Course Outcomes or COs

CO1: Interpret the impact and challenges posed by IoT networks leading to new architectural models.

CO2: Compare and contrast the deployment of smart objects and the technologies to connect them to network.

CO3: Appraise the role of IoT protocols for efficient network communication.

CO4: Elaborate the need for Data Analytics and Security in IoT.

CO5: Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	03.02.2020 to 18.02.2020	**Module- 1** **Introduction on IoT**, What is IoT, Genesis of IoT, IoT and Digitization, IoT Impact, Convergence of IT and IoT, IoT Challenges, IoT Network Architecture and Design, Drivers Behind New Network Architectures, Comparing IoT Architectures, A Simplified IoT Architecture, The Core IoT Functional Stack, IoT Data Management and Compute Stack. **No. of Contact Sessions: 13**	https://www.youtube.com/watch?v=WLVAAjsswJI&list=PLeva2gx99WXMf_In5pMvxjf843jzoFk4 https://www.youtube.com/watch?v=8NDtv3HEX2w&list=PLeva2gx99WXMf_In5pMvxjf843jzoFk&index=2 https://www.youtube.com/watch?v=AMf_JDwLM&list=PLeva2gx99WXMf_In5pMvxjf843jzoFk&index=6 https://www.youtube.com/watch?v=AMf_JDwLM&list=PLeva2gx99WXMf_In5pMvxjf843jzoFk&index=6

2.	18.02.2020 to 09.03.2020	**Module -2** Smart Objects: The "Things" in IoT, Sensors, Actuators, and Smart Objects, Sensor Networks, Connecting Smart Objects, Communications Criteria, IoT Access Technologies. **No. of Contact Sessions: 14**	https://www.youtube.com/watch?v=aJVAZ9wlPgA&list=PLzuuIgm998NMF_InSgMhvqB943juo64i&index=2 https://www.youtube.com/watch?v=3s0SB0BwE&list=PLzuuIgm998NMF_InSgMhvqB943juo64i&index=4 https://www.youtube.com/watch?v=8hrEnbvInt0&list=PLzuuIgm998NMF_InSgMhvqB943juo64i&index=10 https://www.youtube.com/watch?v=RVfbrdrBwLo&list=PLzuuIgm998NMF_InSgMhvqB943juo64i&index=11
3.	10.03.2020 to 31.03.2020	**Module -3** IP as the IoT Network Layer, The Business Case for IP, The need for Optimization, Optimizing IP for IoT, Profiles and Compliances, Application Protocols for IoT, The Transport Layer, IoT Application Transport Methods. **No. of Contact Sessions: 13**	https://www.youtube.com/watch?v=aP346xuuQ8k https://www.youtube.com/watch?v=SwvLCE-U44g https://www.youtube.com/watch?v=X1tNzfa2I20 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+optcl&ots=g1qf8vfDC8&sig=L4r6C3E42kSLE-r_gvs29Gfvsq Y&v=onepage&q&f=false

4.	31.03.2020 to 04.05.2020	**Module -4** Data and Analytics for IoT, An Introduction to Data Analytics for IoT, Machine Learning, Big Data Analytics Tools and Technology, Edge Streaming Analytics, Network Analytics, Securing IoT, A Brief History of OT Security, Common Challenges in OT Security, How IT and OT Security Practices and Systems Vary, Formal Risk Analysis Structures: OCTAVE and FAIR, The Phased Application of Security in an Operational Environment. **No. of Contact Sessions: 14**	https://www.youtube.com/watch?v=LaNZ6jDWQ&list=PLRaqFtk3c9QN7Mm0PaIaDcr0x_sRvGdEd https://www.youtube.com/watch?v=3.05a-H3Bk https://www.youtube.com/watch?v=88MS3I1iCds&list=PLJpCv00qw0Se5eSfCPmG0J7J9OJBN https://www.simplilearn.com/article/articles?ar=20186?&utm3sm=1
5.	04.05.2020 to 20.05.2020	**Module -5** IoT Physical Devices and Endpoints - Arduino UNO: Introduction to Arduino, Arduino UNO, Installing the Software, Fundamentals of Arduino Programming. IoT Physical Devices and Endpoints - RaspberryPi: Introduction to RaspberryPi, About the RaspberryPi Board: Hardware Layout, Operating Systems on RaspberryPi, Configuring RaspberryPi, Programming RaspberryPi with Python, Wireless Temperature Monitoring System Using Pi, DS18B20 Temperature Sensor, Connecting Raspberry Pi via SSH, Accessing Temperature from DS18B20 sensors, Remote access to RaspberryPi, Smart and Connected Cities, An IoT Strategy for Smarter Cities, Smart City IoT Architecture, Smart City Security Architecture, Smart City Use-Case Examples. **No. of Contact Sessions: 14**	https://www.youtube.com/watch?v=Am9SW1T_Qvs&list=PLxxo2gn-9WXMf_Jo5pMvxjf043joo9r-i&index=17 https://www.youtube.com/watch?v=1090UAn31c2w&list=PLxxo2gn-9WXMf_Jo5pMvxjf043joo9r-i&index=18 https://www.youtube.com/watch?v=fBvKuk2VmJc&list=PLxxo2gn-9WXMf_Jo5pMvxjf043joo9r-i&index=27 https://www.youtube.com/watch?v=s2AKMLRnfB0&list=PLxxo2gn-9WXMf_Jo5pMvxjf043joo9r-i&index=28 https://www.youtube.com/watch?v=oNWnB3dZW8M&list=PLxxo2gn-9WXMf_Jo5pMvxjf043joo9r-i&index=26

TEXT BOOK:

1. David Hanes, Gonzalo Salgueiro, Patrick Grossetete, Robert Barton, Jerome Henry,"IoT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things", 1st Edition, Pearson Education (Cisco Press Indian Reprint). (ISBN: 978-9386873743)

2. Srinivasa K G, "Internet of Things", CENGAGE Learning India, 2017

REFERENCE BOOKS:

1. Vijay Madisetti and ArshdeepBahga, "Internet of Things (A Hands -on- Approach)", 1st Edition, VPT, 2014. (ISBN: 978-8173719547)

2. Raj Kamal, "Internet of Things: Architecture and Design Princi ples", 1st Edition, McGraw Hill Education, 2017. (ISBN: 978-9352605224).

Mr. Chethan M S
Staff Incharge

Prof. [illegible]
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEPTEMBER 2020 -JANUARY2021) MICROSCHEDULE

SUBJECT	Computer Organization	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	18CS34	SEM/SEC	III A & B
IA Marks (CIE)	40(Average of three tests for 30marks and 10marks for assignment)	Maximum Exam Marks (SEE)	60(Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

MODULE 1

ASL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	02/09/20	TUE	**Module 1:** **Basic Structure of Computers:** Basic OperationalConcepts, Bus Structures,	Covered	
2	03/09/20	THU	Performance – Processor Clock, Basic Performance Equation,	Covered	
3	04/09/20	FRI	Clock Rate, Performance Measurement	Covered	
4	07/09/20	TUE	**Machine Instructions and Programs:** Memory Location and Addresses	Covered	
5	09/09/20	WED	Memory Operations, Instructions and Instruction Sequencing	Covered	
6	10/09/20	THU	Addressing Modes,	Covered	
7	11/09/20	FRI	Assembly Language, Basic Input and Output Operations	Covered	
8	14/09/20	TUE	Stacks and Queues,	Covered	
9	16/09/20	THU	Subroutines,	Covered	
10	17/09/20	TUE	SubroutinesContd....	Covered	
11	18/09/20	WED	Additional InstructionsContd	Covered	
12	18/09/20	THU	Additional InstructionsContd..., Encoding of Machine Instructions	Covered	Extra

SUMMARY

PLANNED DATE	FROM: 02.09.2020	TO:18.09.2020	
ACTUAL CLASSES TAKEN	FROM: 8/9/2020	TO: 18/9/2020	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER: YES

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. N... PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Principal

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	21/09/20	FRI	**Module 2: Input/output Organization:** Accessing I/O Devices	Covered	
14	21/09/20	TUE	Interrupts – Interrupt Hardware	Covered	Extra
15	23/09/20	WED	Enabling and Disabling Interrupts	Covered	
16	24/09/20	THU	Handling Multiple Devices	Covered	
17	25/09/20	FRI	Controlling Device Requests, Exceptions,	Covered	
18	28/09/20	TUE	Direct Memory Access, Buses	Covered	
19	30/09/20	WED	BusesContd....	Covered	
20	01/10/20	THU	Interface Circuits	Covered	
21	02/10/20	FRI	Standard I/O Interfaces	Covered	
22	05/10/20	THU	Standard I/O InterfacesContd.,PCI &SCSI Bus	Covered	
23	07/10/20	FRI	SCSI Bus Contd., USB	Covered	
24	07/10/20	TUE	USB continued....	Covered	Extra

SUMMARY

PLANNED DATE	**FROM: 21.09.2020**	**TO: 07.10.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 21/9/2020	**TO:** 7/10/2020	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:** YES	**IA 2:** YES	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C.M Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
BHOOJ RESTITUTE OF
ENGINEERING & TECHNOLOGY
Hunasamaranahalli - 572105

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	08/10/20	WED	**Module 3:** **Memory System :** Basic concepts,	Covered	
26	09/10/20	THU	Semiconductor RAM Memories	Covered	
27	12/10/20	FRI	Read Only Memories, Speed, Size, and Cost	Covered	
28	14/10/20	TUE	Read Only Memories, Speed, Size, and Cost Continued…	Covered	
29	15/10/20	WED	Cache Memories-Mapping functions	Covered	
30	16/10/20	THU	Cache Memories-Mapping functions Continued….	Covered	
31	19/10/20	FRI	Cache Memories-Mapping functions Continued….	Covered	
32	21/10/20	TUE	Replacement Algorithms,	Covered	
33	22/10/20	WED	Replacement Algorithms,	Covered	
34	23/10/20	THU	Performance Considerations Continued….	Covered	
35	26/10/20	FRI	Performance Considerations Continued….	Covered	
36	26/10/20	TUE	Performance Considerations Continued….	Covered	Extra

SUMMARY

PLANNED DATE	FROM: 08.10.2020	TO: 26.10.2020	
ACTUAL CLASSES TAKEN	FROM: 8/10/2020	TO: 26/10/2020	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	28/10/20	WED	**Module 4:** **Arithmetic:** Numbers, Arithmetic Operations and Characters	Covered	
38	29/10/20	THU	Arithmetic Operations and Characters Continued...	Covered	
39	30/10/20	FRI	Addition and Subtraction of Signed Numbers	Covered	
40	02/11/20	TUE	Design of Fast Adders	Covered	
41	04/11/20	WED	Multiplication of Positive Numbers	Covered	
42	05/11/20	TUE	Signed Operand Multiplication	Covered	
43	06/11/20	WED	Fast Multiplication	Covered	
44	09/11/20	THU	Fast Multiplication Continued...	Covered	
45	11/11/20	TUE	Integer Division	Covered	
46	12/11/20	WED	Integer Division Continued...	Covered	
47	13/11/20	THU	Integer Division Continued...	Covered	

SUMMARY

PLANNED DATE	**FROM: 28.10.2020**	**TO: 13.11.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 28/10/2020	**TO:** 13/11/2020	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** YES
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V Sharmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
48	16/11/20	FRI	**Module 5:** **Basic Processing Unit** Some Fundamental Concepts	Covered	
49	18/11/20	TUE	Some Fundamental Concepts Continued.....	Covered	
50	19/11/20	THU	Execution of aComplete Instruction	Covered	
51	20/11/20	FRI	Multiple Bus Organization	Covered	
52	23/11/20	TUE	Multiple Bus OrganizationContd.....	Covered	
53	25/11/20	WED	Hard-wired Control	Covered	
54	26/11/20	THU	Micro programmed Control	Covered	
55	27/11/20	FRI	**Embedded System and Large Computer Systems:**Examples of Embedded Systems	Covered	
56	27/11/20	TUE	Processor chips for embedded applications,	Covered	
57	30/11/20	WED	Simple Microcontroller.	Covered	
58	30/11/20	TUE	The Structure of General-Purpose Multiprocessors	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.11.2020**	**TO: 30.11.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 16/11/2020	**TO:** 30/11/2020	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** NIL
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** NIL	**TUTORIALS:**	**QP DISCUSSION:** NIL
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C.Y.Shanmukaraamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SRI SIDDHARTHA INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEPTEMBER 2020 -JANUARY2021) MACROSCHEDULE

SUBJECT	Computer Organization	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	18CS34	SEM/SEC	III A & B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

Course Outcomes or COs

After studying this course, students will be able to:

CO1: Explain the basic organization of a computer system.
CO2: Demonstrate functioning of different sub systems, such as processor, Input/output,and
CO3: Memory.
CO5: Illustrate hardwired control and micro programmed control, pipelining, embedded and other computing systems.
CO4: Design and analyze simple arithmetic and logical units.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	02.09.2020 to 18.09.2020	**Module- 1** **Basic Structure of Computers**: Basic OperationalConcepts, Bus Structures,Performance – Processor Clock, Basic Performance Equation,Clock Rate, Performance Measurement, **Machine Instructions and Programs**: Memory Location and Addresses, Memory Operations, Instructions and Instruction Sequencing, Addressing Modes,Assembly Language, Basic Input and Output Operations, Stacks and Queues,Subroutines,Additional Instructions, Encoding of Machine Instructions. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=WUYAjanwjU4&list=PLzxz2gn-9WXMf_InSpMvxjf043joof4-i https://www.youtube.com/watch?v=BXDsYh1EV2s&list=PLzxz2gn-9WXMf_InSpMvxjf043joof4-i&index=2 https://www.youtube.com/watch?v=-YMjl_Uw1M&list=PLzxz2gn-9WXMf_InSpMvxjf043joof4-i&index=6 https://www.youtube.com/watch?v=-YMjl_Uw1M&list=PLzxz2gn-9WXMf_InSpMvxjf043joof4-i&index=6

2.	18.09.2020 to 07.10.2020	**Module -2** **Input/output Organization:** Accessing I/O Devices, Interrupts – Interrupt Hardware, Enabling and Disabling Interrupts, Handling Multiple Devices, Controlling Device Requests, Exceptions,Direct Memory Access, Buses, Interface Circuits, Standard I/O Interfaces PCI ,SCSI & USB Bus **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=aJVEZPw8gAA&list=PLeu2ga-9WXMf_ie5pMvvjf043jnnf4-i&index=2 https://www.youtube.com/watch?v=8XzfXDi6BtwE&list=PLeu2ga-9WXMf_ie5pMvvjf043jnnf4-i&index=4 https://www.youtube.com/watch?v=8KiGwbwImOM&list=PLeu2ga-9WXMf_ie5pMvvjf043jnnf4-i&index=10 https://www.youtube.com/watch?v=BYIhc4tDwLo&list=PLeu2ga-9WXMf_ie5pMvvjf043jnnf4-i&index=11
3.	08.10.2020 to 26.10.2020	**Module -3** **Memory System :** Basic concepts, Semiconductor RAM Memories, Read Only Memories, Speed, Size, and Cost, Cache Memories-Mapping functions, Replacement Algorithms, Performance Considerations . **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=aP346youQOk https://www.youtube.com/watch?v=SwvLCE-U44g https://www.youtube.com/watch?v=X1iNzla2I20 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+nptel&ots=gLqfshzDC8&sig=L4rbCtF42kSLE-g_gvs29Ofxq_Y#v=onepage&q&f=false

4.	28.10.2020 to 13.11.2020	**Module -4** **Arithmetic**: Numbers, Arithmetic Operations and Characters , Addition and Subtraction of Signed Numbers, Design of Fast Adders, Multiplication of Positive Numbers,Signed Operand Multiplication, Fast Multiplication, Integer Division. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=La-SZsiQ0vQ&list=PLBwF0k1e9QS7Mm0SeIeOwr0x_sbvG1G4 https://www.youtube.com/watch?v=3ZF5u1C0I3 https://www.youtube.com/playlist?v=8883MS5T1UC&list=PL3nGv8HuwF02a57w0XCFmfuMk7J9CFIX https://www.cbcgreen.com/article/computer-organization-and-architecture-tutorials
5.	16.11.2020 to 30.11.2020	**Module -5** **Basic Processing Unit** Some Fundamental Concepts,Execution of aComplete Instruction,Multiple Bus Organization, Hard-wired Control, Micro programmed Control, **Embedded System and Large Computer Systems:**Examples of Embedded Systems, Processor chips for embedded applications,Simple Microcontroller.The Structure of General-Purpose Multiprocessors **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=Am9SW1T_Qvs&list=PLaxu2gn-9WXMf_In5pMvxjf043jzof4-i&index=17 https://www.youtube.com/watch?v=H90EAn3Uc2w&list=PLaxu2gn-9WXMf_In5pMvxjf043jzof4-i&index=18 https://www.youtube.com/watch?v=fBjyKuk2YmIo&list=PLaxu2gn-9WXMf_In5pMvxjf043jzof4-i&index=22 https://www.youtube.com/watch?v=s2AKMERsf8Q&list=PLaxu2gn-9WXMf_In5pMvxjf043jzof4-i&index=28

Mr. Chethan M S
Staff In charge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEPTEMBER 2020 -JANUARY2021) MACROSCHEDULE

SUBJECT	MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	18CS51	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

Course Outcomes or COs

CO1: Define management, organization, entrepreneur, planning ERP and outline their importance in entrepreneurship.

CO2: Utilize the resources available effectively through ERP.

CO3: Make use of IRPs and Institutional support in entrepreneurship.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	02.09.2020 to 18.09.2020	**Module- 1** Meaning, nature and characteristics of management, scope and Functional areas of management, goals of management, levels of management, brief overview of evolution of management theories, Planning- Nature, importance, types of plans, steps in planning. Organizing- nature and purpose, types of Organization, Staffing- meaning, process of recruitment and selection. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=WUYAisnwjU4&list=PLxxa2gp-9WXMf_bi5pMvxj0943joof4-j https://www.youtube.com/watch?v=BXDsYhIEV2w&list=PLxxa2gp-9WXMf_bi5pMvxj0943joof4-i&index=2 https://www.youtube.com/watch?v=-VMjl_iPwUM&list=PLxxa2gp-9WXMf_bi5pMvxj0943joof4-i&index=6 https://www.youtube.com/watch?v=-VMjl_iPwUM&list=PLxxa2gp-9WXMf_bi5pMvxj0943joof4-i&index=6 .

2.	18.09.2020 to 07.10.2020	**Module -2** Directing and controlling- meaning and nature of directing, leadership styles, motivation Theories, Communication- Meaning and importance, Coordination- meaning and importance, Controlling- meaning, steps in controlling, methods of establishing control. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=gJYEZPwfEgA&list=PLzxuIqs-9WXMf_In5pMvxi0Mjus0Ai6Ai&index=3 https://www.youtube.com/watch?v=bXa0XB6BwEA&list=PLzxuIqs-9WXMf_In5pMvxi0Mjus0Ai6Ai&index=8 https://www.youtube.com/watch?v=0hzGwbwJmOM&list=PLzxuIqs-9WXMf_In5pMvxi0Mjus0Ai6Ai&index=10 https://www.youtube.com/watch?v=0Yt0r4DwLok&list=PLzxuIqs-9WXMf_In5pMvxi0Mjus0Ai6Ai&index=11
3.	08.10.2020 to 26.10.2020	**Module -3** Entrepreneur – meaning of entrepreneur, characteristics of entrepreneurs, classification and types of entrepreneurs, various stages in entrepreneurial process, role of entrepreneurs in economic development, entrepreneurship in India and barriers to entrepreneurship. Identification of business opportunities, market feasibility study, technical feasibility study, financial feasibility study and social feasibility study. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=gP346youOOk https://www.youtube.com/watch?v=SwvLCE-U44g https://www.youtube.com/watch?v=X1iNzla2f20 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?id=en&lr=&id=QdfTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+Io+nptel&ots=gJqfshzDC8&sig=L4rbCtF42kSLE-z_evsZ9GfixqY#v=onepage&q&f=false

4.	28.10.2020 to 13.11.2020	**Module -4** Preparation of project and ERP - meaning of project, project identification, project selection, project report, need and significance of project report, contents,formulation, guidelines by planning commission for project report, Enterprise Resource Planning: Meaning and Importance- ERP and Functional areas of Management – Marketing / Sales- Supply Chain Management – Finance and Accounting – Human Resources – Types of reports and methods of report generation. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=LaeNZcOB-0&list=PLRaxf1KLe9DN7MgOPnIeQwrQn_dbvGJfG4 https://www.youtube.com/watch?v=YZf5u3CfbY https://www.youtube.com/watch?v=BBMSJTUCdw&list=PL2gG-4HuwB2n67wfCCPmvhfk7JWJ9Y https://www.slideserve.com/arifides/erp-ppt?c=2863867&ssq=1
5.	16.11.2020 to 30.11.2020	**Module -5** Micro and Small Enterprises: Definition of micro and small enterprises, characteristics and advantages of micro and small enterprises, steps in establishing micro and small enterprises, Government of India indusial policy 2007 on micro and small enterprises, case study (Microsoft), Case study(Captain G R Gopinath),case study (N R Narayana Murthy & Infosys), Institutional support: MSME-DI, NSIC, SIDBI, KIADB, KSSIDC, TECSOK, KSFC, DIC and District level single window agency, Introduction to IPR. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=Am9SW1T_Qvs&list=PLaxo2ga-9WXMf_In5pMvxjf043jnof4-i&index=17 https://www.youtube.com/watch?v=H9OEAn3Uc2w&list=PLaxo2ga-9WXMf_In5pMvxjf043jnof4-i&index=18 https://www.youtube.com/watch?v=fDvKuk2YmJc&list=PLaxo2ga-9WXMf_In5pMvxjf043jnof4-i&index=22 https://www.youtube.com/watch?v=s2AKMERn0bQ&list=PLaxo2ga-9WXMf_In5pMvxjf043jnof4-i&index=28

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

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SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEPTEMBER 2020 -JANUARY2021) MICROSCHEDULE

SUBJECT	MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	18CS81	SEM/SEC	V 'A'
IA Marks (CIE)	40(Average of three tests for 30marks and 10marks for assignment)	Maximum Exam Marks (SEE)	60(Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

MODULE 1					
ASL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	02/09/20	TUE	**Module 1:** **Introduction** -: Meaning, Nature and characteristics of Management	Covered	
2	03/09/20	MON	Scope and functional areas of management,	Covered	
3	04/09/20	SAT	Goals of Management, Levels of Management	Covered	
4	07/09/20	TUE	brief overview of evolution of management theories	Covered	
5	09/09/20	WED	Planning- Nature, importance,	Covered	
6	10/09/20	SAT	types of plans, steps in planning,	Covered	
7	11/09/20	TUE	Organizing- nature and purpose,	Covered	
8	14/09/20	THU	types of Organization,	Covered	
9	16/09/20	SAT	types of Organization continued…	Covered	
10	17/09/20	TUE	Staffing- meaning,	Covered	
11	18/09/20	WED	process of recruitment and selection	Covered	

SUMMARY

PLANNED DATE	FROM: 02.09.2020	TO: 18.09.2020	
ACTUAL CLASSES TAKEN	FROM: 2/9/2020	TO: 18/9/2020	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

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Staff In-charge

Prof. C V Shanmukaswamy
HOD, CSE

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	18/09/20	THU	**Module 2: Directing and controlling-**	Covered	
13	21/09/20	SAT	meaning and nature of directing	Covered	
14	23/09/20	TUE	leadership styles,	Covered	
15	24/09/20	THU	motivation Theories,	Covered	
16	25/09/20	SAT	Communication- Meaning and importance,	Covered	
17	28/09/20	TUE	Communication- Meaning and importance continued.....	Covered	
18	30/09/20	WED	Coordination meaning and importance.	Covered	
19	01/10/20	THU	Coordination meaning and importance continued.....	Covered	
20	02/10/20	SAT	Controlling- meaning,	Covered	
21	05/10/20	TUE	steps in controlling,	Covered	
22	07/10/20	WED	methods of establishing control.	Covered	

SUMMARY

PLANNED DATE	**FROM: 18.09.2020**	**TO: 07.10.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 18/9/2020	**TO:** 7/10/2020	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** YES	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Staff Incharge

Prof. C.V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	08/10/20	TUE	**Module 3:** **Entrepreneur** – meaning of entrepreneur,	Covered	
24	09/10/20	WED	characteristics of entrepreneurs,	Covered	
25	12/10/20	THU	classification and types of entrepreneurs,	Covered	
26	14/10/20	SAT	various stages in entrepreneurial process,	Covered	
27	15/10/20	TUE	role of entrepreneurs in economic development,	Covered	
28	16/10/20	WED	Entrepeneurship in India and barriers to entrepreneurship.	Covered	
29	19/10/20	THU	identification of business opportunities,	Covered	
30	21/10/20	SAT	market feasibility study,	Covered	
31	22/10/20	TUE	technical feasibility stud	Covered	
32	23/10/20	WED	financial feasibility study and social feasibility study	Covered	
33	26/10/20	THU	financial feasibility study and social feasibility study continued.....	Covered	

SUMMARY

PLANNED DATE	**FROM: 08.10.2020**	**TO:26.10.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 8/10/2020	**TO:** 26/10/2020	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** YES	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Kumar
Principal
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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	28/10/20	SAT	**Module 4:** **Preparation of project and ERP** - meaning of project,	Covered	
35	29/10/20	TUE	project identification,	Covered	
36	30/10/20	WED	project selection,	Covered	
37	02/11/20	THU	project report, need and significance of project report,	Covered	
38	04/11/20	SAT	contents, formulation,	Covered	
39	05/11/20	TUE	guidelines by planning commission for project report,	Covered	
40	06/11/20	WED	**Enterprise Resource Planning: Meaning and Importance- ERP**	Covered	
41	09/11/20	THU	**ERP** and Functional areas of Management	Covered	
42	11/11/20	THU	Marketing / Sales- Supply Chain Management, Finance and Accounting	Covered	
43	12/11/20	SAT	Human Resources – Types of reports and methods of report generation	Covered	
44	13/11/20	TUE	Human Resources – Types of reports and methods of report generation	Covered	

SUMMARY

PLANNED DATE	**FROM: 28.10.2020**	**TO: 13.11.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 28/10/2020	**TO:** 13/11/2020	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** YES	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra V G
Principal

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YUMKUR - 572106

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
45	16/11/20	WED	**Module 5:** **Micro and Small Enterprises:** Definition of micro and small enterprises,	Covered	
46	18/11/20	THU	characteristics and advantages of micro and small enterprises,	Covered	
47	19/11/20	SAT	steps in establishing micro and small enterprises,	Covered	
48	20/11/20	TUE	Government of India industrial policy 2007 on micro and small enterprises,	Covered	
49	23/11/20	WED	case study (Microsoft), Case study(Captain G R Gopinath)	Covered	
50	25/11/20	THU	Case study (N R Narayana Murthy & Infosys).	Covered	
51	26/11/20	SAT	**Institutional support:** MSME-DI, NSIC,	Covered	
52	27/11/20	TUE	SIDBI, KIADB, KSSIDC, TECSOK, KSFC,	Covered	
53	27/11/20	WED	DIC and District level single window agency.	Covered	
54	30/11/20	TUE	**Introduction to IPR.**	Covered	
55	30/11/20	THU	Patent acts and rules...	Covered	
56	30/11/20	THU	REVISION	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.11.2020**	**TO: 30.11.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 16/11/2020	**TO:** 30/11/2020	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** YES
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Shivakumaraiah
Principal

PRINCIPAL
SRI SIDDHARTHA INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -AUG 2021) MACROSCHEDULE

COURSE	OBJECT ORIENTED CONCEPTS	STAFF NAME	PROF. CHETHAN M S
COURSE CODE	18CS45	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- ✓ Explain the object-oriented concepts and JAVA.
- ✓ Develop computer programs to solve real world problems in Java.
- ✓ Develop simple GUI interfaces for a computer program to interact with users, and to understand
- ✓ the event-based GUI handling principles using swings.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 05.05.2021	**Module 1:Introduction to Object Oriented Concepts:** A Review of structures, Procedure-Oriented Programming system, Object OrientedProgramming System, Comparison of Object Oriented Language with C, Console I/O,variables and reference variables, Function Prototyping, Function Overloading. **Class andObjects:** Introduction, member functions and data, objects and functions. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=wKkioWBhwSBY https://www.programming.com/tutorial/reference-head https://www.youtube.com/watch?v=dBhwK6APEz0 https://www.youtube.com/watch?v=uEmDrdarXDA https://www.tutorialspoint.com/cplusplus/cpp_class_member_functions.htm
2	08.05.2021 to 25.05.2021	**Module -2: Class and Objects (contd):** Objects and arrays, Namespaces, Nested classes, Constructors, Destructors. **Introduction to Java:** Java's magic: the Byte code; Java Development Kit (JDK); the JavaBuzzwords, Object-oriented programming; Simple Java programs. Data types, variables andarrays, Operators, Control Statements. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=PYzwuLTMmI https://www.w3schools.com/java/java_intro.asp https://www.youtube.com/watch?v=6mvASbZEg https://www.youtube.com/watch?v=8CQYE-4xsM https://www.youtube.com/watch?v=orUTqJCnbRE&list=PL59LYwnGM1MMSBPiLN4aM

			s\M?Bwv\ibb
3	26.05.2021 to 15.06.2021	**Module -3:Classes, Inheritance,Exception Handling:** Classes: Classes fundamentals; Declaringobjects; Constructors, this keyword, garbage collection. **Inheritance:** inheritance basics,using super, creating multi level hierarchy, method overriding. **Exception handling:**Exception handling in Java **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=V-PQvK3i8Y8 https://www.geeksforgeeks.org/inheritance-in-java/ https://beginnershook.com/2014/01/method-overriding-in-java-with-example/
4	16.06.2021 to 12.07.2021	**Module -4: Packages and Interfaces:**Packages, Access Protection, Importing Packages. Interfaces. **Multi Threaded Programming:**MultiThreaded Programming: What are threads? How to make the classes threadable ; Extending threads; Implementing runnable; Synchronization; Changing state of the thread; Bounded buffer problems, producer consumer problems. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=mHEPYPCzbW8 https://www.youtube.com/watch?v=L35fk58vXBg https://www.youtube.com/watch?v=xSbrrLUGNM https://www.java67.com/2012/12/producer-consumer-problem-with-wait-and-notify-example.html
5	13.07.2021 to 07.08.2021	**Module -5** **Event Handling:** Two event handling mechanisms; The delegation event model; Eventclasses; Sources of events; Event listener interfaces; Using the delegation event model; Adapter classes; Inner classes. **Swings:** Swings: The origins of Swing; Two key Swing features; Components andContainers; The Swing Packages; A simple Swing Application; Create a Swing Applet; JLabel and ImageIcon; JTextField;The Swing Buttons; JTabbedpane; JScrollPane; JList;JComboBox; JTable. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=DNnXTE-bZBM https://www.youtube.com/watch?v=KeP1CBkPYaA&list=PL4fmiJEraInYuzwfvwodHHRzn0PZNKOnf https://cs.colostate.edu/~mcrwright/java/swing.html https://www.youtube.com/watch?v=k0038U90TOo

Textbooks:

1. Sourav Sahay, Object Oriented Programming with C++ , 2nd Ed, Oxford University Press,2006
2. Herbert Schildt, Java The Complete Reference, 7th Edition, Tata McGraw Hill, 2007.

Reference Books:

1. Mahesh Bhave and Sunil Patekar, "Programming with Java", First Edition, Pearson Education,2008, ISBN:9788131720806
2. Herbert Schildt, The Complete Reference C++, 4th Edition, Tata McGraw Hill, 2003.
3. Stanley B.Lippmann, Josee Lajoie, C++ Primer, 4th Edition, Pearson Education, 2005.
4. Rajkumar Buyya,S Thamarai selvi, xingchen chu, Object oriented Programming with java, Tata McGraw Hill education private limited.
5. Richard A Johnson, Introduction to Java Programming and OOAD, CENGAGE Learning.
6. E Balaguruswamy, Programming with Java A primer, Tata McGraw Hill companies.

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TUMAKUR - 572106.

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -AUG 2021) MICROSCHEDULE

COURSE	OBJECT ORIENTED CONCEPTS	STAFF NAME	PROF. CHETHAN M S
COURSE CODE	18CS45	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	**Introduction to Object Oriented Concepts**	Covered	
2	20/04/21	TUE	A Review of structures, Procedure-Oriented Programming system	Covered	
3	21/04/21	WED	Object OrientedProgramming System	Covered	
4	24/04/21	SAT	Comparison of Object Oriented Language with C	Covered	
5	26/04/21	MON	Console I/O,variables and reference variables	Covered	
6	27/04/21	TUE	Function Prototyping, Function Overloading.	Covered	
7	28/04/21	WED	**Class andObjects:** Introduction	Covered	
8	03/05/21	MON	member functions and data	Covered	
9	04/05/21	TUE	,member functions and datacont...	Covered	
10	05/05/21	WED	objects and functions.	Covered	

SUMMARY

PLANNED DATE	FROM: 19.04.2021	TO: 05.05.2021	
ACTUAL CLASSES TAKEN	FROM: 19/4/21	TO: 5/5/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	08/05/21	SAT	**Class and Objects (contd)**	Covered	
12	10/05/21	MON	Objects and arrays, Namespaces	Covered	
13	11/05/21	TUE	Nested classes, Constructors, Destructors	Covered	
14	12/05/21	WED	**Introduction to Java:** Java's magic: the Byte code	Covered	
15	15/05/21	SAT	Java Development Kit (JDK)	Covered	
16	17/05/21	MON	the JavaBuzzwords	Covered	
17	18/05/21	TUE	Object-oriented programming	Covered	
18	19/05/21	WED	Simple Java programs	Covered	
19	22/05/21	SAT	Data types, variables andarrays	Covered	
20	24/05/21	MON	Operators, Control Statements.	Covered	
21	25/05/21	TUE	Doubts Clearing Session	Covered	

SUMMARY

PLANNED DATE	FROM: 08.05.2021	TO: 25.05.2021	
ACTUAL CLASSES TAKEN	FROM: 8/5/21	TO: 25/5/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
22	26/05/21	WED	**Classes, Inheritance,Exception Handling**	Covered	
23	29/05/21	SAT	Classes: Classes fundamentals	Covered	
24	31/05/21	MON	Declaring objects, Constructors	Covered	
25	01/06/21	TUE	this keyword	Covered	
26	02/06/21	WED	garbage collection.	Covered	
27	05/06/21	SAT	**Inheritance:** inheritance basics	Covered	
28	07/06/21	MON	using super	Covered	
29	08/06/21	TUE	creatingmulti level hierarchy, method overriding.	Covered	
30	09/06/21	WED	**Exception handling:**Exception handling in Java	Covered	
31	12/06/21	SAT	Exception handling in Java	Covered	
32	14/06/21	MON	Revision	Covered	
33	15/06/21	TUE	Doubts Clearing Session	Covered	

SUMMARY

PLANNED DATE	**FROM: 26.05.2021**	**TO:15.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 26/5/21	**TO:** 15/6/21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 15	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** Yes	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:**	**QP DISCUSSION:** Yes
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	16/06/21	WED	**Packages and Interfaces**	Covered	
35	19/06/21	SAT	Packages, Access Protection	Covered	
36	21/06/21	MON	Importing Packages, Interfaces.	Covered	
37	22/06/21	TUE	Importing Packages, Interfacecontin…	Covered	
38	23/06/21	WED	**Multi Threaded Programming:**Multi Threaded Programming	Covered	
39	26/06/21	SAT	What are threads? How to make the classes threadable	Covered	
40	03/07/21	MON	Extending threads, Implementing runnable	Covered	
41	05/07/21	MON	Synchronization, Changing state of the thread	Covered	
42	06/07/21	TUE	Bounded buffer problems	Covered	
43	07/07/21	WED	producer consumer problems.	Covered	
44	10/07/21	SAT	Revision	Covered	
45	12/07/21	MON	Previous Question Paper Solution Discussion	Covered	

SUMMARY

PLANNED DATE	**FROM:16.06.2021**	**TO: 12.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 16/6/21	**TO:** 12/7/21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** YES
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
46	13/07/21	TUE	**Event Handling:** Two event handling mechanisms	Covered	
47	14/07/21	WED	The delegation event model,Eventclasses	Covered	
48	17/07/21	SAT	Sources of events, Event listener interfaces	Covered	
49	19/07/21	MON	Using the delegation event model	Covered	
50	20/07/21	TUE	Adapter classes, Inner classes.	Covered	
51	24/07/21	SAT	**Swings:** Swings: The origins of Swing, Two key Swing features	Covered	
52	26/07/21	MON	Components and Containers, The Swing Packages	Covered	
53	27/07/21	TUE	A simple Swing Application, Create a Swing Applet, Jlabel and Imageicon	Covered	
54	28/07/21	WED	JTextField, The Swing Buttons, JTabbedpane	Covered	
55	02/08/21	MON	JScrollPane, JList, JComboBox, JTable.	Covered	
56	03/08/21	TUE	Revision	Covered	
57	04/08/21	WED	Previous Question Paper Solution Discussion	Covered	
58	07/08/21	SAT	Doubts Clearing Session	Covered	

SUMMARY

PLANNED DATE	FROM: 13.07.2021	TO: 07.08.2021	
ACTUAL CLASSES TAKEN	FROM: 13/7/21	TO: 7/8/21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

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DEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -JULY 2021) MACROSCHEDULE

SUBJECT	INTERNET OF THINGS TECHNOLOGY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	17CS81/15CS81	SEM/SEC	VIII
IA Marks (CIE)	40/20 (Average of three tests for 30/15 marks and 10/05 marks for assignment)	Maximum Exam Marks (SEE)	60/80 (Question paper will be set and evaluated for 60/80 marks)

Course Outcomes or COs

CO1: Interpret the impact and challenges posed by IoT networks leading to new architectural models.

CO2: Compare and contrast the deployment of smart objects and the technologies to connect themto network.

CO3: Appraise the role of IoT protocols for efficient network communication.

CO4:Elaborate the need for Data Analytics and Security in IoT.

CO5: Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	19.04.2021 to 05.05.2021	**Module- 1** **Introduction on IoT,** What is IoT, Genesis of IoT, IoT and Digitization, IoT Impact, Convergence of IT and IoT, IoT Challenges, IoT Network Architecture and Design, Drivers Behind NewNetwork Architectures, Comparing IoTArchitectures, A Simplified IoT Architecture, The Core IoT Functional Stack, IoT Data Management and Compute Stack. **No. of Contact Sessions: 13**	https://www.youtube.com/watch?v=WUVA(uuwjU4&list=PLxxu2gn-9WXMf_In5pMvxjfB43joof4-i https://www.youtube.com/watch?v=BXDsYh1EV2w&list=PLxxu2gn-9WXMf_In5pMvxjfB43joof4-i&index=2 https://www.youtube.com/watch?v=-YMjf_IbvUM&list=PLxxu2gn-9WXMf_In5pMvxjfB43joof4-i&index=8 https://www.youtube.com/watch?v=-YMjf_IbvUM&list=PLxxu2gn-9WXMf_In5pMvxjfB43joof4-i&index=8

2.	05.05.2021 to 27.05.2021	**Module -2** Smart Objects: The "Things" in IoT, Sensors, Actuators, and Smart Objects, Sensor Networks, Connecting Smart Objects, Communications Criteria, IoT Access Technologies. **No. of Contact Sessions: 13**	https://www.youtube.com/watch?v=aJYEZPwI5qA&list=PLzxuIqu-9WXMf_hz5uMbxjf043jzeH-i&index=2 https://www.youtube.com/watch?v=5Xz0X888dwE&list=PLzxuIqu-9WXMf_hz5uMbxjf043jzeH-i&index=4 https://www.youtube.com/watch?v=8MGnkwIneOM&list=PLzxuIqu-9WXMf_hz5uMbxjf043jzeH-i&index=10 https://www.youtube.com/watch?v=BYie4tDwLsk&list=PLzxuIqu-9WXMf_hz5pMvxjf043jzeH-i&index=11
3.	28.05.2021 to 16.06.2021	**Module -3** IP as the IoT Network Layer, The Business Case for IP, The need for Optimization, Optimizing IP for IoT, Profiles and Compliances, Application Protocols for IoT, TheTransport Layer, IoT Application Transport Methods. **No. of Contact Sessions: 13**	https://www.youtube.com/watch?v=aP346youQOk https://www.youtube.com/watch?v=SwvLCE-1144g https://www.youtube.com/watch?v=X1fNzba2020 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+gate&ots=gIqfsbzDC8&sig=L4rbCtF42kSLE-g_gvsZ9Gfixq Y#v=onepage&q&f=false

4.	17.06.2021 to 02.07.2021	**Module –4** Data and Analytics for IoT, An Introduction to Data Analytics for IoT, Machine Learning, Big Data Analytics Tools and Technology, Edge Streaming Analytics,Network Analytics, Securing IoT, A Brief History of OT Security, Common Challengesin OT Security, How IT and OT Security Practices and Systems Vary, Formal RiskAnalysis Structures: OCTAVE and FAIR, The Phased Application of Security in anOperational Environment. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=LeNZ6jO6eQ&list=PLRaeE0KLe9QN7Mm0Pp4aDnr0n_dvGdGt4 https://www.youtube.com/watch?v=YZf5u4C0BX https://www.youtube.com/watch?v=8BM5STI1Cdw&list=PLJnGv40tqwE02e57wf7S3TbnfvBr2JW9X https://www.cisoarena.com/articles/article.asp?a=28096&aspName=4
5.	05.07.2021 to 20.07.2021	**Module -5** IoT Physical Devices and Endpoints - Arduino UNO: Introduction to Arduino, Arduino UNO, Installing the Software, Fundamentals of Arduino Programming. IoTPhysical Devices and Endpoints - RaspberryPi: Introduction to RaspberryPi, About theRaspberryPi Board: Hardware Layout, Operating Systems on RaspberryPi, ConfiguringRaspberryPi, Programming RaspberryPi with Python, Wireless Temperature MonitoringSystem Using Pi, DS18B20 Temperature Sensor, Connecting Raspberry Pi via SSH,Accessing Temperature from DS18B20 sensors, Remote access to RaspberryPi, Smartand Connected Cities, An IoT Strategy for Smarter Cities, Smart City IoT Architecture, Smart City Security Architecture, Smart City Use-Case Examples. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=Am9SW1T_Qvs&list=PLaxu2gn-9WXMf_In5pMvxjf043jeof4-i&index=17 https://www.youtube.com/watch?v=H9OEAn3Us2w&list=PLaxu2gn-9WXMf_In5pMvxjf043jeof4-i&index=18 https://www.youtube.com/watch?v=fBvKuk7VmJc&list=PLaxu2gn-9WXMf_In5pMvxjf043jeof4-i&index=22 https://www.youtube.com/watch?v=s2AKMERnf80&list=PLaxu2gn-9WXMf_In5pMvxjf043jeof4-i&index=28 https://www.youtube.com/watch?v=sNWnB3dZWNM&list=PLaxu2gn-9WXMf_In5pMvxjf043jeof4-i&index=26

Mr. Chethan M S
Staff Incharge

Prof. C V S[illegible]
HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-05.

Dr. Nar[illegible]nath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -JULY2021) MICROSCHEDULE

SUBJECT	INTERNET OF THINGS TECHNOLOGY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	17CS81/15CS81	SEM/SEC	VIII
IA Marks (CIE)	40/20 (Average of three tests for 30/15 marks and 10/05 marks for assignment)	Maximum Exam Marks (SEE)	60/80 (Question paper will be set and evaluated for 60/80 marks)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	**Module 1:** **Introduction on IoT**, What is IoT	✓	
2	19/04/21	MON	Genesis of IoT,	✓	
3	20/04/21	TUE	IoT and Digitization,	✓	
4	21/04/21	WED	IoT and Digitization,	✓	
5	21/04/21	WED	IoT Impact,	✓	
6	26/04/21	MON	Convergence of IT and IoT	✓	
7	26/04/21	MON	IoT Challenges	✓	
8	27/04/21	TUE	IoT Network Architecture and Design	✓	
9	28/04/21	WED	Drivers Behind New Network Architectures,	✓	
10	28/04/21	WED	Comparing IoT Architectures,	✓	
11	03/05/21	MON	A Simplified IoT Architecture	✓	
12	04/05/21	TUE	The Core IoT Functional Stack,	✓	
13	05/05/21	WED	IoT Data Management and Compute Stack	✓	

SUMMARY

PLANNED DATE	FROM: 19.04.2021	TO:05.05.2021	
ACTUAL CLASSES TAKEN	FROM: 19/04/21	TO: 05/05/21	
NUMBER OF CLASSES	ALLOCATED:13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-05.

PRINCIPAL
DR. SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
14	06/05/21	THU	Module 2: Smart Objects	✓	
15	10/05/21	MON	The "Things" in IoT,	✓	
16	11/05/21	TUE	Sensors,	✓	
17	12/05/21	WED	Sensors,	✓	
18	13/05/21	THU	Actuators,	✓	
19	17/05/21	MON	Actuators,	✓	
21	18/05/21	TUE	Smart Objects,	✓	
21	19/05/21	WED	Sensor Networks,	✓	
22	20/05/21	THU	Sensor Networks,	✓	
23	24/05/21	MON	Connecting Smart Objects,	✓	
24	25/05/21	TUE	Communications Criteria,	✓	
25	26/05/21	WED	Communications Criteria,	✓	
26	27/05/21	THU	IoT Access Technologies	✓	

SUMMARY

PLANNED DATE	FROM: 06.05.2021	TO: 27.05.2021	
ACTUAL CLASSES TAKEN	FROM: 06/5/2021	TO: 27/5/21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof.C V Ramaswamy
HOD, CSE

Dr.Narendra Viswanath
PRINCIPAL
SHRI SIDDHARTHA INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
27	28/05/21	FRI	**Module 3:** IP as the IoT Network Layer,	✓	
28	31/05/21	MON	IP as the IoT Network Layercontd…	✓	
29	01/06/21	TUE	The Business Case for IP,	✓	
30	02/06/21	WED	The Business Case for IP contd…	✓	
31	03/06/21	THU	The need for optimization,	✓	
32	07/06/21	MON	The need for optimization contd…	✓	
33	08/06/21	TUE	Optimizing IP for IoT,	✓	
34	09/06/21	WED	Profiles and Compliances,	✓	
35	10/06/21	THU	Application Protocols for IoT,	✓	
36	11/06/21	FRI	Application Protocols for IoTcontd…	✓	
37	14/06/21	MON	The Transport Layer,	✓	
38	15/06/21	TUE	IoT Application Transport Methods,	✓	
39	16/06/21	WED	IoT Application Transport Methods contd…	✓	

SUMMARY

PLANNED DATE	**FROM: 28.05.2021**	**TO:16.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 28/05/21	**TO:** 16/06/21	
NUMBER OF CLASSES	**ALLOCATED: 13**	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD CSE
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-05

Dr. Narendra Viswanath
PRINCIPAL
SIDDAGANGA INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
40	17/06/21	THU	**Module 4:** Data and Analytics for IoT	✓	
41	18/06/21	FRI	An Introduction to Data Analytics for IoT,	✓	
42	21/06/21	MON	Machine Learning,	✓	
43	22/06/21	TUE	Big Data Analytics Tools and Technology	✓	
44	23/06/21	WED	Edge Streaming Analytics,	✓	
45	24/06/21	THU	Network Analytics,	✓	
46	25/06/21	FRI	Securing IoT,	✓	
47	28/06/21	MON	A Brief History of OT Security,	✓	
48	29/06/21	TUE	Common Challenges in OT Security,	✓	
49	30/06/21	WED	How IT and OT Security Practices and Systems Vary	✓	
50	01/07/21	THU	Formal Risk Analysis Structures: OCTAVE and FAIR,	✓	
51	02/07/21	FRI	The Phased Application of Security in an OperationalEnvironment	✓	

SUMMARY

PLANNED DATE	**FROM: 17.06.2021**	**TO: 02.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 17/6/21	**TO:** 02/7/21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

HOD/MSE

PRINCIPAL
SHRINIVAS INSTITUTE OF ENGINEERING & TECHNOLOGY
MANGALURU

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
52	05/07/21	MON	**Module 5:** IoT Physical Devices and Endpoints - Arduino UNO:	✓	
53	06/07/21	TUE	Introduction to Arduino,Arduino UNO,	✓	
54	07/07/21	WED	Installing the Software, Fundamentals of Arduino Programming.	✓	
55	08/07/21	THU	IoT Physical Devices and Endpoints - RaspberryPi: Introduction to RaspberryPi,	✓	
56	09/07/21	FRI	About the RaspberryPi Board: Hardware Layout,	✓	
57	12/07/21	MON	Operating Systems on RaspberryPi, Configuring RaspberryPi,	✓	
58	13/07/21	TUE	Programming RaspberryPi with Python,	✓	
59	14/07/21	WED	Wireless Temperature Monitoring System Using Pi, DS18B21 Temperature Sensor,	✓	
60	15/07/21	THU	Connecting Raspberry Pi via SSH, Accessing Temperature from DS18B21 sensors	✓	
61	16/07/21	FRI	Remote access to RaspberryPi, Smart and Connected Cities,	✓	
62	19/07/21	MON	An IoT Strategy for Smarter Cities, Smart City IoT Architecture,	✓	
63	20/07/21	TUE	Smart City Security Architecture, Smart City Use-Case Examples.	✓	

SUMMARY

PLANNED DATE	**FROM: 05.07.2021**	**TO: 20.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 05/07/21	**TO:** 20/07/21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V [illegible]
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-08.

Dr. Narendra Kumath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (NOVEMBER 2022–FEBRAURY 2023) MACROSCHEDULE

SUBJECT	Computer Organization & Architecture	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	21CS34	SEM/SEC	III-A
IA Marks (CIE)	The minimum passing mark for the CIE is 40% of the maximum marks Average of three tests for 20marks and 10marks for assignment & 20 Marks for Group discussion/Seminar/quiz any one of three	Maximum Exam Marks (SEE)	50(Question paper will be set and evaluated for 100 marks and later reduced to 50 marks)

Course Outcomes or COs

At the end of the course the student will be able to:

CO1: Explain the organization and architecture of computer systems with machine instructions and Programs.
CO2: Analyze the input/output devices communicating with computer system.
CO3: Demonstrate the functions of different types of memory devices.
CO4: Apply different data types on simple arithmetic and logical unit.
CO5: Analyze the functions of basic processing unit, Parallel processing and pipelining.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	03.11.2022 to 18.11.2022	**Module- 1** **Basic Structure of Computers:** Basic Operational Concepts, Bus Structures, Performance – Processor Clock, Basic Performance Equation, Clock Rate, Performance Measurement. **Machine Instructions and Programs:** Memory Location and Addresses, Memory Operations, Instructions and Instruction Sequencing, Addressing Modes **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=WLYAJnwjE4&list=PLzxuIgm-9WXMF_bSpMvvj0b4JjroF4-j https://www.youtube.com/watch?v=BX0x5h1EV2w&list=PLzxuIgm-9WXMF_bSpMvvj0b4JjroF4-j&index=2 https://www.youtube.com/watch?v=-VMjLJDv1M&list=PLzxuIgm-9WXMF_bSpMvvj0b4JjroF4-j&index=3 https://www.youtube.com/watch?v=-VMjLJDv1M&list=PLzxuIgm-9WXMF_bSpMvvj0b4JjroF4-j&index=3

2.	19.11.2022 to 03.12.2022	**Module -2** **Input/Output Organization:** Accessing I/O Devices, Interrupts – Interrupt Hardware, Direct Memory Access, Buses, Interface Circuits **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=gIXGZPw0Sz4&list=PLeoglgw-99tXMLJn0p99vaJ9MJ6poD3cd&index=3 https://www.youtube.com/watch?v=S0aflXB0dvI&list=PLeoglgw-99tXMLJn0p99vaJ9MJ6poD3cd&index=4 https://www.youtube.com/watch?v=0RjGnbuterU&list=PLeoglgw-99tXMLJn0p99vaJ9MJ6poD3cd&index=10 https://www.youtube.com/watch?v=IOyIr0dDvLo&list=PLeoglgw-99tXMLJn0p99vaJ9MJ6poD3cd&index=11
3.	06.12.2022 to 24.12.2022	**Module -3** **Memory System:** Basic Concepts, Semiconductor RAM Memories, Read Only Memories, Speed, Size, and Cost, Cache Memories – Mapping Functions, Virtual memories . **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP340yvuQS8 https://www.youtube.com/watch?v=8ivsUCE-U4g https://www.youtube.com/watch?v=XIiNzla2l20 https://www.organizam.com/whitepapers/optimizing-the-internet-of-things-key-strategic-for-commercial-insurers-order2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+mqtt&ots=glgbvrDC3&sig=L4rbC3F42xSLE-r_gvs2PGfoqY&redir_esc=y#v=onepage&q&f=false
4.	27.12.2022 to 17.01.2023	**Module -4** **Arithmetic:** Numbers, Arithmetic Operations and Characters, Addition and Subtraction of Signed Numbers, Design of Fast Adders, Multiplication of Positive Numbers **Basic Processing Unit:** Fundamental Concepts, Execution of a Complete Instruction, Hardwired control, Microprogrammed control **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Lc5Q6HbQhIc&list=PLBqvDKLv9fZMmMbvfpDnvfc_gbvGJGt https://www.youtube.com/watch?v=XZI5uBUBY https://www.youtube.com/watch?v=BSMSJJUGbv8&list=PLbtGvHBpnBEe57nfZUbmfvbZBbJ5 https://www.javatpoint.com/architecture#:~:text=Computer%20Architecture%20is%20defined%20as,and%20the%20memory%20content.

5.	19.01.2022 to 04.02.2022	**Module -5** **Pipeline and Vector Processing:** Parallel Processing, Pipelining, Arithmetic Pipeline, Instruction Pipeline, Vector Processing, Array Processors **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=Am9BW1T_Qvo&list=PLeu2gm-9WXMf_In5pMvxjfB4JjmfA-i&index=17 https://www.youtube.com/watch?v=8B9OfiAr3Ug&list=PLeu2gm-9WXMf_In5pMvxjfB4JjmfA-i&index=18 https://www.youtube.com/watch?v=fBvKuk2Ymlo&list=PLeu2gm-9WXMf_In5pMvxjfB4JjmfA-i&index=22 https://www.youtube.com/watch?v=n2AKMEBvfB0&list=PLeu2gm-9WXMf_In5pMvxjfB4JjmfA-i&index=28

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SCIENCE ENGINEERING

LESSON PLAN (NOVEMBER 2022-FEBRAURY 2023) MACROSCHEDULE

SUBJECT	Computer Organization & Architecture-	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	21CS34	SEM/SEC	III-B
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2.	19.11.2022 to 03.12.2022	**Module -2** **Input/Output Organization:** Accessing I/O Devices, Interrupts – Interrupt Hardware, Direct Memory Access, Buses, Interface Circuits **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=aJY8ZPw1hs4&list=PLxxsJ2zxiWXMLJe5p9Ivx0WH3ioe9-t&index=3 https://www.youtube.com/watch?v=53z0X9868wU&list=PLxxsJ2zxiWXMLJe5p9Ivx0WH3ioe9-t&index=4 https://www.youtube.com/watch?v=4bGGnbwIe9M&list=PLxxsJ2zxiWXMLJe5p9Ivx0WH3ioe9-t&index=10 https://www.youtube.com/watch?v=B0Jm8BwLuRk&list=PLxxsJ2zxiWXMLJe5p9Ivx0WH3ioe9-t&index=11
3.	06.12.2022 to 24.12.2022	**Module -3** **Memory System:** Basic Concepts, Semiconductor RAM Memories, Read Only Memories, Speed, Size, and Cost, Cache Memories – Mapping Functions, Virtual memories **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP346yvuQGk http://www.youtube.com/watch?v=SwxLCL-L94g https://www.youtube.com/watch?v=XUiNcla2320 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-communication-insurers-codex3295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+portal&ots=g1aNvzDCJ8&sig=L4mQEf4TsSLE-g_gvaZ9GJvaYFc#v=onepage&q&f=false
4.	27.12.2022 to 17.01.2023	**Module -4** **Arithmetic:** Numbers, Arithmetic Operations and Characters, Addition and Subtraction of Signed Numbers, Design of Fast Adders, Multiplication of Positive Numbers **Basic Processing Unit:** Fundamental Concepts, Execution of a Complete Instruction, Hardwired control, Microprogrammed control **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=LoNZAiOSeQM&list=PLBlnK6fEyqRiOCNivQ0wU0cjiHoBUCkX1 https://www.youtube.com/watch?v=1JU5xiUR3s https://www.youtube.com/watch?v=8BMSSTTHGbw&list=PL3pGv4Hvm8Ed7mfYDmdVb7PWJSY https://www.electronicshub.org/booth-algorithm/

5.	19.01.2022 to 04.02.2022	**Module -5** **Pipeline and Vector Processing:** Parallel Processing, Pipelining, Arithmetic Pipeline, Instruction Pipeline, Vector Processing, Array Processors **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=AmfSWLT_Qvo&list=PLeva2gx-9WXMf_Ie5pMvxjfl43jxnf4-i&index=17 https://www.youtube.com/watch?v=1B9OEAe31g2&list=PLeva2gx-9WXMf_Ie5pMvxjfl43jxnf4-i&index=18 https://www.youtube.com/watch?v=fBvKuk2VmJg&list=PLeva2gx-9WXMf_Ie5pMvxjfl43jxnf4-i&index=22 https://www.youtube.com/watch?v=s2AKMEBvdBw&list=PLeva2gx-9WXMf_Ie5pMvxjfl43jxnf4-i&index=28

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Suhas G K
HOD, ISE

Dr. Na[illegible]
PRINCIPAL
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (NOVEMBER 2022 -FEBRAURY2023) MICROSCHEDULE

COURSE	Computer Organization & Architecture	STAFF NAME	Mr. Chethan M S
COURSE CODE	21CS34	SEM/SEC	III-A
IA Marks (CIE)	The minimum passing mark for the CIE is 40% of the maximum marks Average of three tests for 20marks and 10marks for assignment & 20 Marks for Group discussion/Seminar/quiz any one of three.	Maximum Exam Marks (SEE)	50(Question paper will be set and evaluated for 100 marks and later reduced to 50 marks)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/11/22	MON	**Module 1:** **Basic Structure of Computers**: Basic Operational Concepts, Bus Structures,	Covered	
2	04/11/22	FRI	Performance – Processor Clock,	Covered	
3	05/11/22	SAT	Basic Performance Equation,	Covered	
4	08/11/22	TUE	Clock Rate, Performance Measurement	Covered	
5	10/11/22	THU	**Machine Instructions and Programs**: Memory Location and Addresses	Covered	
6	12/11/22	SAT	Memory Operations, Instructions and Instruction Sequencing	Covered	
7	15/11/22	TUE	Instructions and Instruction Sequencing, Continue…	Covered	
8	17/11/22	THU	Addressing Modes,	Covered	
9	18/11/22	FRI	Addressing Modes Continue…	Covered	

SUMMARY

PLANNED DATE	FROM: 03.11.2022	TO: 18.11.2022	
ACTUAL CLASSES TAKEN	FROM: 03/11/22	TO: 18/11/22	
NUMBER OF CLASSES	ALLOCATED: 09	TAKEN: 09	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD CSE

Dr. Nagendra Kumar
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
10	19/11/22	SAT	**Module 2: Input/output Organization:** Accessing I/O Devices	Covered	
11	22/11/22	TUE	Interrupts – Interrupt Hardware	Covered	
12	24/11/22	THU	Enabling and Disabling Interrupts	Covered	
13	25/11/22	FRI	Handling Multiple Devices	Covered	
14	26/11/22	SAT	Controlling Device Requests, Exceptions,	Covered	
15	29/11/22	TUE	Direct Memory Access, Buses	Covered	
16	01/12/22	THU	Bus Arbitrations	Covered	
17	02/12/22	FRI	Interface Circuits	Covered	
18	03/12/22	SAT	Interface Circuits continue.	Covered	

SUMMARY

PLANNED DATE	**FROM: 19.11.2022**	**TO: 03.12.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 19/11/22	**TO:** 03/12/22	
NUMBER OF CLASSES	**ALLOCATED: 09**	**TAKEN:** 09	
CONTENT COVERED FOR IA	**IA 1:** YES	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:** YES	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:** YES	**ANY OTHER:**

Mr. Chethan M S
Staff In charge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
19	06/12/22	TUE	**Module 3: Memory System :** Basic concepts,	Covered	
20	08/12/22	THU	Semiconductor RAM Memories	Covered	
21	13/12/22	TUE	Semiconductor RAM Memories continue…	Covered	
22	15/12/22	THU	Read Only Memories, Speed, Size, and Cost	Covered	
23	16/12/22	FRI	Cache Memories-Mapping functions	Covered	
24	17/12/22	SAT	Cache Memories-Mapping functions Continued….	Covered	
25	20/12/22	TUE	Cache Memories-Mapping functions Continued….	Covered	
26	22/12/22	THU	Replacement Algorithms,	Covered	
27	23/12/22	FRI	Virtual Memories	Covered	
28	24/12/22	SAT	Virtual Memories Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 06.12.2022	TO: 24.12.2022	
ACTUAL CLASSES TAKEN	FROM: 06/12/22	TO: 24/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Dr. Balasubramanya S
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SAHYADRI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
29	27/12/22	TUE	**Module 4:** **Arithmetic**: Numbers, Arithmetic Operations and Characters	Covered	
30	29/12/22	THU	Arithmetic Operations and Characters Continued....	Covered	
31	30/12/22	FRI	Addition and Subtraction of Signed Numbers	Covered	
32	31/12/22	SAT	Design of Fast Adders	Covered	
33	03/01/23	TUE	Multiplication of Positive Numbers	Covered	
34	05/01/23	THU	**Basic Processing Unit** Some Fundamental Concepts	Covered	
35	06/01/23	FRI	Execution of a Complete Instruction	Covered	
36	07/01/23	SAT	Hard-wired Control	Covered	
37	10/01/23	TUE	Micro programmed Control	Covered	
38	17/01/23	TUE	Micro programmed Control Continue...	Covered	

SUMMARY

PLANNED DATE	FROM: 27.12.2021	TO:17.01.2023	
ACTUAL CLASSES TAKEN	FROM: 27/12/22	TO: 17/1/23	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Dr. Dakshayini M
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
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TUMKUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
39	19/01/23	THU	**Module 5:** **Pipeline and Vector Processing:**	Covered	
40	20/01/23	FRI	Parallel Processing	Covered	
41	21/01/23	SAT	Pipelining.	Covered	
42	24/01/23	TUE	Arithmetic Pipeline	Covered	
43	27/01/23	FRI	Instruction Pipeline.	Covered	
44	28/01/23	SAT	Vector Processing	Covered	
45	02/02/23	THU	Array Processors	Covered	
46	03/02/23	FRI	REVISION	Covered	
47	04/02/23	SAT	REVISION	Covered	

SUMMARY

PLANNED DATE	**FROM: 19.01.2023**	**TO: 04.02.2023**	
ACTUAL CLASSES TAKEN	**FROM:** 19/1/23	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 09**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	IA 3: YES
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:** YES	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:** YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Dr. Sahana D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SRINIDHI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SCIENCE ENGINEERING

LESSON PLAN (NOVEMBER 2022 -FEBRAURY2023) MICROSCHEDULE

COURSE	**Computer Organization & Architecture**	**STAFF NAME**	**Mr. Chethan M S**
COURSE CODE	**21CS34**	**SEM/SEC**	**III-B**
IA Marks (CIE)	**The minimum passing mark for the CIE is 40% of the maximum marks Average of three tests for 20marks and 10marks for assignment & 20 Marks for Group discussion/Seminar/quiz any one of three.**	**Maximum Exam Marks (SEE)**	**50(Question paper will be set and evaluated for 100 marks and later reduced to 50 marks)**

MODULE 1					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
1	31/10/22	MON	**Module 1:** **Basic Structure of Computers:** Basic Operational Concepts, Bus Structures,	Covered	
2	02/11/22	WED	Performance – Processor Clock,	Covered	
3	03/11/22	THU	Basic Performance Equation,	Covered	
4	07/11/22	MON	Clock Rate, Performance Measurement	Covered	
5	08/11/22	TUE	**Machine Instructions and Programs:** Memory Location and Addresses	Covered	
6	09/11/22	WED	Memory Operations, Instructions and Instruction Sequencing	Covered	
7	10/11/22	THU	Instructions and Instruction Sequencing, Continue...	Covered	
8	14/11/22	MON	Addressing Modes,	Covered	
9	15/11/22	TUE	Addressing Modes Continue...	Covered	

SUMMARY

PLANNED DATE	**FROM: 31.10.2022**	**TO:15.11.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 31/10/22	**TO:** 15/11/22	
NUMBER OF CLASSES	**ALLOCATED: 09**	**TAKEN:** 09	
CONTENT COVERED FOR IA	**IA 1:** YES	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:** YES	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:** YES	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. [illegible] Shanmukaswamy/ Dr. Suhas G K.
HOD CSE/ HOD ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
10	16/11/22	WED	**Module 2: Input/output Organization:** Accessing I/O Devices	Covered	
11	17/11/22	THU	Interrupts – Interrupt Hardware	Covered	
12	21/11/22	MON	Enabling and Disabling Interrupts	Covered	
13	22/11/22	TUE	Handling Multiple Devices	Covered	
14	23/11/22	WED	Controlling Device Requests, Exceptions,	Covered	
15	24/11/22	THU	Direct Memory Access, Buses	Covered	
16	28/11/22	MON	Bus Arbitrations	Covered	
17	29/11/22	TUE	Interface Circuits	Covered	
18	30/11/22	WED	Interface Circuits continue.	Covered	
19	01/12/22	THU	Interface Circuits continue.	Covered	

SUMMARY

PLANNED DATE	FROM: 16.11.2022	TO: 01.12.2022	
ACTUAL CLASSES TAKEN	FROM: 16/11/22	TO: 01/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff In charge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SAHYADRI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
20	05/12/22	MON	**Module 3: Memory System :** Basic concepts,	Covered	
21	06/12/22	TUE	Semiconductor RAM Memories	Covered	
22	07/12/22	WED	Semiconductor RAM Memories continue....	Covered	
23	08/12/22	THU	Read Only Memories, Speed, Size, and Cost	Covered	
24	13/12/22	TUE	Cache Memories-Mapping functions	Covered	
25	14/12/22	WED	Cache Memories-Mapping functions Continued....	Covered	
26	15/12/22	THU	Cache Memories-Mapping functions Continued....	Covered	
27	19/12/22	MON	Replacement Algorithms,	Covered	
28	20/12/22	TUE	Virtual Memories	Covered	
29	21/12/22	WED	Virtual Memories Continue...	Covered	

SUMMARY

PLANNED DATE	FROM: 05.12.2022	TO: 21.12.2022	
ACTUAL CLASSES TAKEN	FROM: 5/12/22	TO: 21/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Dr. Ramesha.D
HOD, CSE

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
30	22/12/22	THU	**Module 4:** **Arithmetic**: Numbers, Arithmetic Operations and Characters	Covered	
31	26/12/22	MON	Arithmetic Operations and Characters Continued....	Covered	
32	27/12/22	TUE	Addition and Subtraction of Signed Numbers	Covered	
33	28/12/22	WED	Design of Fast Adders	Covered	
34	29/12/22	THU	Multiplication of Positive Numbers	Covered	
35	02/01/23	MON	**Basic Processing Unit** Some Fundamental Concepts	Covered	
36	03/01/23	TUE	Execution of a Complete Instruction	Covered	
37	04/01/23	WED	Hard-wired Control	Covered	
38	05/01/23	THU	Micro programmed Control	Covered	
39	09/01/23	MON	Micro programmed Control Continue...	Covered	

SUMMARY

PLANNED DATE	FROM: 22.12.2022	TO:09.01.2023	
ACTUAL CLASSES TAKEN	FROM: 22/12/22	TO: 09/1/23	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Dr. [illegible]
HOD, CSE

/Dr. Sahas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
40	10/01/23	TUE	**Module 5:** **Pipeline and Vector Processing:**	Covered	
41	16/01/23	MON	Parallel Processing	Covered	
42	17/01/23	TUE	Pipelining.	Covered	
43	18/01/23	WED	Arithmetic Pipeline	Covered	
44	19/01/23	THU	Instruction Pipeline.	Covered	
45	23/01/23	MON	Vector Processing	Covered	
46	24/01/23	TUE	Array Processors	Covered	
47	25/01/23	WED	Array Processors Continue...	Covered	
48	01/02/23	WED	REVISION	Covered	
49	02/02/23	THU	REVISION	Covered	

SUMMARY

PLANNED DATE	FROM: 10.01.2023	TO: 02.02.2023	
ACTUAL CLASSES TAKEN	FROM: 10/1/23	TO: 09/02/23	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Dr. Bakkeshwara D
HOD, CSE

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (OCT-JAN 2022-23)

Name of the Staff : Chethan M S

Sub.Code : 18CSL57

Subject: COMPUTER NETWORK LABORATORY

Class: V Sem, B2-Batch

Course Learning Objectives:

This Course will enable students to:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	12/10/2022	**PART A** Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Covered	
02	19/10/2022	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Covered	
03	02/11/2022	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Covered	
04	09/11/2022	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Covered	
05	16/11/2022	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Covered	
06	23/11/2022	Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	Covered	
07	30/11/2022	Lab Internals I	Covered	
08	07/12/2022	**PART B (Implement the following in Java)** Write a program for error detecting code using CRC-CCITT (16-bits).	Covered	
09	14/12/2022	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Covered	
10	21/12/2022	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Covered	
11	28/12/2022	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Covered	
12	04/01/2023	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Covered	
13	11/01/2023	Write a program for congestion control using leaky bucket algorithm.	Covered	
14	25/01/2023	Lab Internals II	Covered	

Mr. Chethan MS
Staff Incharge

PRINCIPAL
SIET, TUMAKURU

Prof. C V Shanmukharadhy
HOD, CSE

IDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (OCT-JAN 2022-23)

Name of the Staff : Chethan M S — *Sub.Code* : 18CSL57

Subject: COMPUTER NETWORK LABORATORY — **Class: V Sem, B1-Batch**

Course Learning Objectives:

This Course will enable students to:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	10/10/2022	**PART A** Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Covered	
02	17/10/2022	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Covered	
03	31/10/2022	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Covered	
04	07/11/2022	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Covered	
05	21/11/2022	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Covered	
06	28/11/2022	Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	Covered	
07	05/12/2022	Lab Internals I	Covered	
08	12/12/2022	**PART B (Implement the following in Java)** Write a program for error detecting code using CRC-CCITT (16-bits).	Covered	
09	26/12/2022	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Covered	
10	02/01/2023	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Covered	
11	09/01/2023	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Covered	
12	10/01/2023	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Covered	Extra
13	23/01/2023	Write a program for congestion control using leaky bucket algorithm.	Covered	
14	24/01/2023	Lab Internals II	Covered	Extra

Mr. Chethan M S
Staff Incharge

PRINCIPAL
BIET, TUMAKURU

Prof. [illegible]
HOD, CSE

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LAB PLAN (OCT-JAN 2022-23)

Name of the Staff : Chethan M S | *Sub.Code* : 18CSL57

Subject: COMPUTER NETWORK LABORATORY | *Class*: V Sem, B3-Batch

Course Learning Objectives:

This Course will enable students to:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	15/10/2022	**PART A** Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Covered	
02	21/10/2022	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Covered	
03	28/10/2022	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Covered	
04	04/11/2022	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Covered	
05	18/11/2022	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Covered	
06	25/11/2022	Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	Covered	
07	02/12/2022	Lab Internals I	Covered	
08	09/12/2022	**PART B (Implement the following in Java)** Write a program for error detecting code using CRC-CCITT (16-bits).	Covered	
09	23/12/2022	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Covered	
10	30/12/2022	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Covered	
11	06/01/2023	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Covered	
12	13/01/2023	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Covered	
13	20/01/2023	Write a program for congestion control using leaky bucket algorithm.	Covered	
14	27/01/2023	Lab Internals II	Covered	

Mr. Chethan M S
Staff Incharge

PRINCIPAL
SIET, TUMAKURU.

Prof. C V Shanmukhaswamy
HOD, CSE

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEP -DEC2022) MICROSCHEDULE

SUBJECT	USER INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS734	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/09/22	MON	The User Interface-Introduction	Covered	
2	20/09/22	TUE	Overview, The importance of user interface	Covered	
3	26/09/22	WED	Overview, The importance of user interfacecont....	Covered	
4	27/09/22	THU	Defining the user interface	Covered	
5	28/09/22	MON	The importance of Good design	Covered	
6	01/10/22	TUE	The importance of Good design	Covered	
7	03/10/22	WED	Characteristics ofgraphical and web user interfaces	Covered	
8	08/10/22	THU	Characteristics ofgraphical and web user interfacescont....	Covered	
9	10/10/22	MON	Principles of user interface design	Covered	
10	11/10/22	TUE	Principles of user interface design.	Covered	

SUMMARY

PLANNED DATE	FROM: 19.09.2022	TO: 11.10.2022	
ACTUAL CLASSES TAKEN	FROM: 19.09.2022	TO:11.10.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	12/10/22	WED	The User Interface Design process-Obstacles	Covered	
12	15/10/22	THU	Usability	Covered	
13	17/10/22	MON	Human characteristics in Design	covered	
14	18/10/22	TUE	Human Interaction speeds	covered	
15	19/10/22	WED	Business functions-Business definition and requirement analysis	Covered	
16	22/10/22	THU	Business functions-Business definition and requirement analysiscont…	Covered	
17	25/10/22	MON	Basic business functions	Covered	
18	31/10/22	TUE	Basic business functionscont…	Covered	
19	02/11/22	WED	Design standards.	Covered	
20	05/11/22	THU	Design standardscont…..	Covered	

SUMMARY

PLANNED DATE	FROM: 12.10.2022	TO: 05.11.2022	
ACTUAL CLASSES TAKEN	FROM:12.10.2022	TO:05.11.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
21	07/11/22	MON	System menus and navigation schemes-, ... Kinds of graphical menus.	Covered	
22	08/11/22	TUE	Structures of menus	Covered	
23	09/11/22	WED	Functions of menus	Covered	
24	14/11/22	THU	Contents of menus	Covered	
25	15/11/22	MON	Formatting of menus	Covered	
26	16/11/22	TUE	Phrasing the menu	Covered	
27	19/11/22	WED	Selectingmenu choices	Covered	
28	21/11/22	THU	Navigating menus	Covered	
29	22/11/22	MON	Kinds of graphical menus.	Covered	
30	23/11/22	TUE	Kinds of graphical menuscont.....	Covered	

SUMMARY

PLANNED DATE	**FROM: 07.11.2022**	**TO:23.11.2022**	
ACTUAL CLASSES TAKEN	**FROM:07.11.2022**	**TO:23.11.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	26/11/22	THU	Windows - Characteristics	Covered	
32	28/11/22	MON	Components of window	Covered	
33	29/11/22	TUE	Window presentationstyles	Covered	
34	30/11/22	WED	Types of window	Covered	
35	30/11/22	THU	Window management	Covered	
36	05/12/22	TUE	Organizing window functions	Covered	
37	06/12/22	WED	Window operations	Covered	
38	06/12/22	THU	Web systems	Covered	
39	07/12/22	WED	Characteristics of device based controls	Covered	
40	10/12/22	THU	Characteristics of device based controls cont...	Covered	

SUMMARY

PLANNED DATE	FROM:26.11.2022	TO: 10.12.2022	
ACTUAL CLASSES TAKEN	FROM:26.11.2022	TO:10.12.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	12/12/22	MON	Screen based controls- Operable control	Covered	
42	13/12/22	TUE	Screen based controls- Operable control cont...	Covered	
43	14/12/22	WED	Text control	Covered	
44	17/12/22	THU	Selection control	Covered	
45	19/12/22	TUE	Custom control	Covered	
46	20/12/22	WED	Presentation control	Covered	
47	21/12/22	THU	Presentation controlcont...	Covered	
48	24/12/22	MON	Windows Tests-prototypes	Covered	
49	26/12/22	TUE	kinds of tests	Covered	
50	31/12/22	WED	kinds of testscont....	Covered	

SUMMARY

PLANNED DATE	FROM: 12.12.2022	TO: 31.12.2022	
ACTUAL CLASSES TAKEN	FROM: 12.12.2022	TO: 31.12.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEPT-DEC 2022) MACROSCHEDULE

SUBJECT	USER INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS734	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Design the User Interface, design, menu creation ,windows creation and connection between menus and windows.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.09.2022 to 11.10.2022	**Module –1** The User Interface-Introduction, Overview, The importance of user interface –Defining the user interface, The importance of Good design, Characteristics ofgraphical and web user interfaces, Principles of user interface design. **No. of Contact Sessions: 10**	Introduction to User Interface Design - User Interface (UI) Design - Startup Guide By Nayan Bheda - YouTube
2	12.10.2022 To 05.11.2022	**Module –2** The User Interface Design process- Obstacles, Usability, Human characteristics in Design, Human Interaction speeds, Business functions-Business definition and requirement analysis, Basic business functions, Design standards. **No. of Contact Sessions: 10**	user interface design	software engineering	- YouTube User Interface Design - Basic Concepts, Types of User Interface - YouTube
3	07.11.2022 to 23.11.2021	**Module –3** System menus and navigation schemes- Structures of menus, Functions of menus, Contents of menus, Formatting of menus, Phrasing the menu, Selectingmenu choices, Navigating menus, Kinds of graphical menus. **No. of Contact Sessions: 10**	Structures of menus / functions of menus / User Interface Design (18CS832) - YouTube
4	26.11.2022 To 10.12.2022	**Module–4** Windows - Characteristics, Components of window, Window presentationstyles, Types of window, Window management, Organizing window functions,Window operations, Web systems, Characteristics of device based controls. **No. of Contact Sessions: 10**	Human characteristics in UI design/ User Interface design (18CS832) 9th sem CSE/VTU - YouTube

5	12.12.2022 to 31.12.2022	**Module-5** Screen based controls- Operable control, Text control, Selection control,Custom control, Presentation control, Windows Tests-prototypes, kinds of tests. **No. of Contact Sessions: 10**	Lecture 36 Screen Based Controls Part 1 Button - YouTube

Textbooks:

Wilbert O. Galitz, "The Essential Guide to User Interface Design", John Wiley &Sons, Second Edition 2002.

Reference Books:

1. Ben Sheiderman, "Design the User Interface", Pearson Education, 1998.
2. Alan Cooper, "The Essential of User Interface Design", Wiley- Dream Tech Ltd.,2002

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Shridevi Institute of Engineering and Technology-Tumakuru-06
(An ISO 9001-2015 Certified Institution)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2019-20(ODD Semester)

COURSE LECTURE PLAN

***Cover Page*: Course Overview**
Semester **: V** **Year: 2019-2020**

Course Title: **Management and Entrepreneurship for IT Industry**	*Subject Code:* **17CS51**
Total contact Hours: 64	*Duration of Exam:* 03 Hrs.
Total exam marks: 60	*Total I.A. marks:* 40
Lesson plan author: Mr. Basavesha D	*Date* 01/08/2019
Checked by: Prof. C V Shanmukaswamy	*Date:* 01/08/2019

Course objectives:
This course will enable students to

- Explain the principles of management, organization and entrepreneur.
- Discuss on planning, staffing, ERP and their importance.
- Infer the importance of intellectual property rights and relate the institutional support

Course outcomes:
After studying this course, students will be able to:

- Define management, organization, entrepreneur, planning, staffing, ERP and outline their importance in entrepreneurship.
- Utilize the resources available effectively through ERP.
- Make use of IPRs and institutional support in entrepreneurship.

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Sl. No.	DATE	Planned Topics	Topics Covered	Remarks
01	25/07/19	**MODULE-1. Introduction** :- Meaning, Nature and characteristics of Management	Covered	
02	26/07/19	Scope and functional areas of management,	Covered	
03	27/07/19	Goals of Management, Levels of Management	Covered	
04	30/07/19	brief overview of evolution of management theories	Covered	
05	01/08/19	Planning- Nature, importance,	Covered	
06	02/08/19	types of plans, steps in planning,	Covered	
07	03/08/19	Organizing- nature and purpose,	Covered	
08	06/08/19	types of Organization,	Covered	
09	08/08/19	types of Organization continued....	Covered	
10	09/08/19	Staffing- meaning,	Covered	
11	10/08/19	process of recruitment and selection	Covered	
12	13/08/19	process of recruitment and selection cont.....	C.	
			Covered	
13	16/08/19	**MODULE-2. Directing and controlling-**	Covered	
14	17/08/19	meaning and nature of directing	Covered	
15	20/08/19	leadership styles,	Covered	
16	22/08/19	motivation Theories,	Covered	
17	23/08/19	Communication- Meaning and importance,	Covered	
18	24/08/19	Communication- Meaning and importance continued.....	Covered	
19	27/08/19	Coordination meaning and importance,	Covered	
20	29/08/19	Coordination meaning and importance continued.....	Covered	
21	30/08/19	Controlling- meaning,	Covered	
22	31/08/19	steps in controlling,	Covered	
23	03/09/19	methods of establishing control	Covered	
24	10/09/19	methods of establishing control cont.....	Covered	
			F	
25	12/09/19	**MODULE-3. Entrepreneur** – meaning of entrepreneur,	Covered	
26	13/09/19	characteristics of entrepreneurs,	Covered	
27	14/09/19	classification and types of entrepreneurs,	Covered	
28	17/09/19	various stages in entrepreneurial process,	Covered	
29	19/09/19	role of entrepreneurs in economic development,	Covered	
30	20/09/16	Entrepreneurship in India and barriers to entrepreneurship	Covered	
31	21/09/19	Identification of business opportunities,	Covered	
32	24/09/19	market feasibility study,	Covered	
33	26/09/19	technical feasibility stud	Covered	
34	27/09/19	financial feasibility study and social feasibility study	Covered	
35	01/10/19	financial feasibility study and social feasibility study continued.....	Covered	
36	03/10/19	financial feasibility study and social feasibility study continued.....	Covered	
37	04/10/19	**MODULE-4. Preparation of project and ERP** - meaning of project,	Covered	

38	05/10/19	project identification,	Covered	
39	08/10/19	project selection,	Covered	
40	10/10/19	project report, need and significance of project report,	Covered	
41	11/10/19	contents, formulation,	Covered	
42	12/10/19	guidelines by planning commission for project report,	Covered	
43	17/10/19	**Resource Planning: Meaning and Importance- ERP**	Covered	
44	18/10/19	**ERP** and Functional areas of Management	Covered	
45	19/10/19	Marketing / Sales- Supply Chain Management,	Covered	
46	22/10/19	Finance and Accounting	Covered	
47	24/10/19	Human Resources – Types of reports and methods of report generation	Covered	
48	25/10/19	Human Resources – Types of reports and methods of report Generation cont….	Covered	
			Covered	
49	26/10/19	**MODULE-5, Micro and Small Enterprises:** Definition of micro and small enterprises,	Covered	
50	31/10/19	characteristics and advantages of micro and small enterprises,	Covered	
51	01/11/19	steps in establishing micro and small enterprises,	Covered	
52	02/11/19	Government of India industial policy 2007 on micro and small enterprises,	Covered	
53	05/11/19	case study (Microsoft), Case study(Captain G R Gopinath)	Covered	
54	07/11/19	Case study (N R Narayana Murthy & Infosys),	Covered	
55	08/11/19	**Institutional support:** MSME-DI, NSIC,	Covered	
56	09/11/19	SIDBI, KIADB, KSSIDC,	Covered	
57	12/11/19	TECSOK, KSFC,	Covered	
58	14/11/19	DIC and District level single window agency,	Covered	
59	16/11/19	**Introduction to IPR.**	Covered	
60	19/11/19	Introduction to IPR cont….	Covered	
61	26/11/19	Revision, Question Paper Discussion	Covered	
62	28/11/19	Revision, Question Paper Discussion	Covered	
63	29/11/19	Revision, Question Paper Discussion	Covered	
64	30/11/19	Revision, Question Paper Discussion	Covered	

Text Books:

1. Principles of Management -P. C. Tripathi, P. N. Reddy; Tata McGraw Hill, 4th / 6th Edition, 2010.
2. Dynamics of Entrepreneurial Development & Management -Vasant Desai Himalaya Publishing House.
3. Entrepreneurship Development -Small Business Enterprises -Poornima M Charantimath Pearson Education – 2006.
4. Management and Entrepreneurship - Kanishka Bedi- Oxford University Press-2019

Reference Books:

1. Management Fundamentals -Concepts, Application, Skill Development Robert Lusier Thomson.
2. Entrepreneurship Development -S S Khanka -S Chand & Co.
3. Management -Stephen Robbins -Pearson Education /PHI -19th Edition, 2003

[Mr. Basavesha D]
Staff Incharge

[Prof. C V Shanmukaswamy]
Head, Dept of CSE

[Dr. Hemadri Naidu T]
Principal

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TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2020) MACRO SCHEDULE

SUBJECT	**OBJECT ORIENTED CONCEPTS**	**STAFF NAME**	**BASAVESHA D**
SUBJECT CODE	**18CS45**	**SEM/SEC**	**IV**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- ✓ Explain the object-oriented concepts and JAVA.
- ✓ Develop computer programs to solve real world problems in Java.
- ✓ Develop simple GUI interfaces for a computer program to interact with users, and to understand
- ✓ the event-based GUI handling principles using swings.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	3.02.2020 to 19.02.2020	**Module 1:Introduction to Object Oriented Concepts:** A Review of structures, Procedure-Oriented Programming system, Object Oriented Programming System, Comparison of Object Oriented Language with C, Console I/O,variables and reference variables, Function Prototyping, Function Overloading. **Class and Objects:** Introduction, member functions and data, objects and functions. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=nKtzlKRm0IQ https://www.cprogramming.com/tutorial/references.html https://www.youtube.com/watch?v=dMmK1PFc0Q https://www.youtube.com/watch?v=oEmJvdeOA04 https://www.tutorialspoint.com/cplusplus/cpp_class_member_functions.htm
2	20.02.2020 to 09.03.2020	**Module -2: Class and Objects (contd):** Objects and arrays, Namespaces, Nested classes, Constructors, Destructors. **Introduction to Java**: Java's magic: the Byte code; Java Development Kit (JDK); the Java Buzzwords, Object-oriented programming; Simple Java programs, Data types, variables and arrays, Operators, Control Statements. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=PVzmuECDbm4 https://www.w3schools.com/java/java_intro.asp https://www.youtube.com/watch?v=G5mvAIhTFg https://www.youtube.com/watch?v=xBCQ12-4voM https://www.youtube.com/watch?v=ueCTqJCshRE&list=PL89LTmvuGMUMNSBPjLN4aMwMTDnwV1n0n

3	11.03.2020 to 01.04.2020	**Module -3: Classes, Inheritance,Exception Handling:** Classes: Classes fundamentals; Declaring objects; Constructors, this keyword, garbage collection. **Inheritance:** inheritance basics, using super, creating multi level hierarchy, method overriding. **Exception handling:** Exception handling in Java **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=3-P928A1918 https://www.geeksforgeeks.org/inheritance-in-java/ https://beginnersbook.com/2014/01/method-overriding-in-java-with-example/
4	02.04.2020 to 29.04.2020	**Module -4: Packages and Interfaces:** Packages, Access Protection, Importing Packages, Interfaces. **Multi Threaded Programming:**Multi Threaded Programming: What are threads? How to make the classes threadable ; Extending threads; Implementing runnable; Synchronization; Changing state of the thread; Bounded buffer problems, producer consumer problems. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=mqEP3VPLv8 https://www.youtube.com/watch?v=8.8Sb9bASBqI https://www.youtube.com/watch?v=aXbvzEEGMM https://www.java67.com/2012/12/producer-consumer-problem-with-wait-and-notify-example.html
5	30.04.2020 to 18.05.2020	**Module -5** **Event Handling:** Two event handling mechanisms; The delegation event model; Eventclasses; Sources of events; Event listener interfaces; Using the delegation event model; Adapter classes; Inner classes. **Swings:** Swings: The origins of Swing; Two key Swing features; Components and Containers; The Swing Packages; A simple Swing Application; Create a Swing Applet; JLabel and ImageIcon; JTextField;The Swing Buttons; JTabbedpane; JScrollPane; JList; JComboBox; JTable. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=0NmXTT-bZBM https://www.youtube.com/watch?v=kxP1CBbdPyk&list=PLJmiIFvaLvUgm5vmuHHRGm9NNiOkt http://cs.colombiastate.edu/cs-tutorials/java/swing.html https://www.youtube.com/watch?v=80U5RE90Ow

Textbooks:

1. Sourav Sahay, Object Oriented Programming with C++ , 2nd Ed, Oxford University Press,2006
2. Herbert Schildt, Java The Complete Reference, 7th Edition, Tata McGraw Hill, 2007.

Reference Books:

1. Mahesh Bhave and Sunil Patekar, "Programming with Java", First Edition, Pearson Education,2008, ISBN:9788131720806
2. Herbert Schildt, The Complete Reference C++, 4th Edition, Tata McGraw Hill, 2003.
3. Stanley B.Lippmann, Josee Lajoie, C++ Primer, 4th Edition, Pearson Education, 2005.
4. Rajkumar Buyya,S Thamarai selvi, xingchen chu, Object oriented Programming with java, Tata McGraw Hill education private limited.
5. Richard A Johnson, Introduction to Java Programming and OOAD, CENGAGE Learning.
6. E Balaguruswamy, Programming with Java A primer, Tata McGraw Hill companies.

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TUMKUR - 572106

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	OBJECT ORIENTED CONCEPTS	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS45	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/20	MON	**Introduction to Object Oriented Concepts**	Covered	
2	05/02/20	TUE	A Review of structures, Procedure-Oriented Programming system	Covered	
3	06/02/20	WED	Object Oriented Programming System	Covered	
4	07/02/20	THU	Comparison of Object Oriented Language with C	Covered	
5	10/02/20	MON	Console I/O,variables and reference variables	Covered	
6	12/02/20	TUE	Function Prototyping, Function Overloading.	Covered	
7	13/02/20	WED	**Class and Objects:** Introduction	Covered	
8	14/02/20	THU	member functions and data	Covered	
9	17/02/20	MON	,member functions and data cont....	Covered	
10	19/02/20	TUE	objects and functions	Covered	

SUMMARY

PLANNED DATE	FROM: 3.02.2020	TO: 19.02.2020	
ACTUAL CLASSES TAKEN	FROM: 3/02/2020	TO: 19/02/2020 ✓	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10 ✓	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS:	ANY OTHER:

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MODULE II					
SL. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	20/02/20	WED	**Class and Objects (contd)**	20/2/20	Covered
12	24/02/20	THU	Objects and arrays, Namespaces	24/2/20	"
13	26/02/20	MON	Nested classes, Constructors, Destructors	26/2/20	Yashwini
14	27/02/20	TUE	**Introduction to Java**: Java's magic: the Byte code	27/2/20	Classes
15	28/02/20	WED	Java Development Kit (JDK)	28/2/20	
16	02/03/20	THU	the Java Buzzwords	2/3/20	
17	04/03/20	MON	Object-oriented programming	4/3/20	
18	05/03/20	TUE	Simple Java programs	5/3/20	
19	06/03/20	WED	Data types, variables and arrays	6/3/20	
20	09/03/20	THU	Operators, Control Statements.	9/3/20	

SUMMARY

PLANNED DATE	**FROM: 20.02.2020**	**TO: 09.03.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 20/02/20	**TO:** 09/03/20	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** Yes	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:**	**QP DISCUSSION:** Yes
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE III					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
21	11/03/20	MON	**Classes, Inheritance,Exception Handling**	11/3/20	
22	12/03/20	TUE	Classes: Classes fundamentals	12/3/20	
23	18/03/20	WED	Declaring objects, Constructors	8/4/20	Covered
24	19/03/20	THU	this keyword	11/4/20	
25	20/03/20	MON	garbage collection.	31/4/20	
26	23/03/20	TUE	**Inheritance:** inheritance basics	6/4/20	
27	26/02/20	WED	using super	8/4/20	
28	27/03/20	THU	creating multi level hierarchy, method overriding.	9/4/20	
29	30/03/20	MON	**Exception handling:** Exception handling in Java	10/4/20	
30	01/04/20	TUE	Exception handling in Java	15/4/20	

SUMMARY

PLANNED DATE	**FROM: 11.03.2020**	**TO:01.04.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 11/3/20	**TO:** 15/4/20	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓ Yes	**TUTORIALS:**	**QP DISCUSSION:** Yes
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	02/04/20	THU	**Packages and Interfaces**	14/4/20	
32	08/04/20	MON	Packages, Access Protection	18/4/20	
33	09/04/20	TUE	Importing Packages, Interfaces	21/4/20	
34	15/04/20	WED	Importing Packages, Interfaces contn...	22/4/20	
35	16/04/20	THU	**Multi Threaded Programming:** Multi Threaded Programming	25/4/20 & 4/5/20	
36	17/04/20	TUE	What are threads? How to make the classes threadable	5/5/20	
37	20/04/20	WED	Extending threads, Implementing runnable	6/5/20	
38	22/04/20	THU	Synchronization, Changing state of the thread	11/5/20 & 12/5/20	
39	23/04/20	WED	Bounded buffer problems	13/5/20	
40	29/04/20	THU	producer consumer problems.	18/5/20 & 19/5/20	

SUMMARY

PLANNED DATE	**FROM:02.04.2020**	**TO: 29.04.2020**	
ACTUAL CLASSES TAKEN	**FROM:** 14/4/20	**TO:** 19/5/20	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	**TUTORIALS:**	**QP DISCUSSION:** YES
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	30/04/20	MON	**Event Handling:** Two event handling mechanisms	22|5|20 & 26|5|20	
42	04/05/20	TUE	The delegation event model, Eventclasses	29|5|20	
43	06/05/20	WED	Sources of events, Event listener interfaces	2|6|20	
44	07/05/20	THU	Using the delegation event model	2|6|20	
45	08/05/20	TUE	Adapter classes, Inner classes.	3|6|20	
46	11/05/20	WED	**Swings:** Swings: The origins of Swing, Two key Swing features	5|6|20	
47	13/05/20	THU	Components and Containers, The Swing Packages	8|6|20	
48	14/05/20	MON	A simple Swing Application, Create a Swing Applet, JLabel and ImageIcon	9|6|20	
49	15/05/20	TUE	JTextField, The Swing Buttons, JTabbedpane	10|6|20	
50	18/05/20	WED	JScrollPane, JList, JComboBox, JTable.	12|6|20	

SUMMARY

PLANNED DATE	FROM: 30.04.2020	TO: 18.05.2020	
ACTUAL CLASSES TAKEN	FROM: 22|5|20	TO: 12|6|20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2020) MICRO SCHEDULE

SUBJECT	MODERN INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	15CS832	SEM/SEC	VIII
IA Marks (CIE)	20 (Average of two tests for 15 marks and 05 marks for assignment)	Maximum Exam Marks (SEE)	80

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	03/02/20	MON	The User Interface-Introduction	Covered	
2	03/02/20	TUE	Overview, The importance of user interface	Covered	
3	04/02/20	WED	Overview, The importance of user interface cont...	Covered	
4	04/02/20	THU	Defining the user interface	Covered	
5	05/02/20	MON	The importance of Good design	Covered	
6	10/02/20	TUE	The importance of Good design	Covered	
7	10/02/20	WED	Characteristics of graphical and web user interfaces	Covered	
8	11/02/20	THU	Characteristics of graphical and web user interfaces cont...	Covered	
9	11/02/20	MON	Principles of user interface design	Covered	
10	12/02/20	TUE	Principles of user interface design.	Covered	

SUMMARY

PLANNED DATE	FROM: 3.02.2020	TO: 12.02.2020	
ACTUAL CLASSES TAKEN	FROM: 3/02/2020	TO: 12/02/2020	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10 ✓	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION:
	QUIZ: —	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	17/02/20	WED	The User Interface Design process-Obstacles	17/2/20	
12	17/02/20	THU	Usability	17/2/20	
13	18/02/20	MON	Human characteristics in Design	18/2/20	
14	18/02/20	TUE	Human Interaction speeds	18/2/20	
15	19/02/20	WED	Business functions-Business definition and requirement analysis	19/2/20	
16	24/02/20	THU	Business functions-Business definition and requirement analysis cont...	24/2/20	
17	24/02/20	MON	Basic business functions	24/2/20	
18	25/02/20	TUE	Basic business functions cont...	25/2/20	
19	25/02/20	WED	Design standards	25/2/20	
20	26/02/20	THU	Design standards cont....	26/2/20	

SUMMARY

PLANNED DATE	FROM: 17.02.2020	TO: 26.02.2020	
ACTUAL CLASSES TAKEN	FROM: 17/2/20	TO: 26/2/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	02/03/20	MON	System menus and navigation schemes-. . . . . Kinds of graphical menus.	02|3|20	
22	02/03/20	TUE	Structures of menus	03|3|20	
23	03/03/20	WED	Functions of menus	03|3|20	
24	03/03/20	THU	Contents of menus	04|3|20	
25	04/03/20	MON	Formatting of menus	6|3|20	
26	09/03/20	TUE	Phrasing the menu	9|3|20	
27	09/03/20	WED	Selecting menu choices	9|3|20	
28	10/03/20	THU	Navigating menus	10|3|20	
29	10/03/20	MON	Kinds of graphical menus.	10|3|20	
30	11/03/20	TUE	Kinds of graphical menus cont....	11|3|20	

SUMMARY

PLANNED DATE	FROM: 02.03.2020	TO:11.03.2020	
ACTUAL CLASSES TAKEN	FROM: 02|03|20	TO: 11|03|20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: -	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	17/03/20	THU	Windows - Characteristics	1|4|20	
32	17/03/20	MON	Components of window	3|4|20	
33	18/03/20	TUE	Window presentation styles	6|4|20	
34	23/03/20	WED	Types of window	8|4|20	
35	23/03/20	THU	Window management	9|4|20	
36	24/03/20	TUE	Organizing window functions	10|4|20	
37	24/03/20	WED	Window operations	14|4|20	
38	30/03/20	THU	Web systems	15|4|20	
39	30/03/20	WED	Characteristics of device based controls	17|4|20	
40	31/03/20	THU	Characteristics of device based controls cont...	22|4|20	

SUMMARY

PLANNED DATE	FROM:17.03.2020	TO: 31.03.2020	
ACTUAL CLASSES TAKEN	FROM: 1|4|20	TO: 22|4|20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: YES

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	31/03/20	MON	Screen based controls- Operable control	31/3/20	
42	01/04/20	TUE	Screen based controls- Operable control cont...	2/4/20	
43	07/04/20	WED	Text control	6/4/20	
44	07/04/20	THU	Selection control	7/4/20	
45	08/04/20	TUE	Custom control	9/4/20	
46	15/04/20	WED	Presentation control	15/4/20	
47	20/04/20	THU	Presentation control cont....	16/4/20	
48	20/04/20	MON	Windows Tests-prototypes	16/4/20	
49	21/04/20	TUE	kinds of tests	20/4/20	
50	21/04/20	WED	kinds of tests cont....	21/4/20	

SUMMARY

PLANNED DATE	FROM: 31.03.2020	TO: 21.04.2020	
ACTUAL CLASSES TAKEN	FROM: 23/4/20	TO: 21/4/20	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -FEB 2022) MACROSCHEDULE

SUBJECT	**UNIX PROGRAMMING**	**STAFF NAME**	**BASAVESHA D**
SUBJECT CODE	**18CS56**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

- Explain Unix Architecture, File system and use of Basic Commands
- Illustrate Shell Programming and to write Shell Scripts
- Categorize, compare and make use of Unix System Calls
- Build an application/service over a Unix system.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	04/10/21 to 22/10/21	**Module –1** **Introduction:** Unix Components/Architecture. Features of Unix. The UNIX Environment and UNIX Structure, Posix and Single Unix specification. General features of Unix commands/ command structure. Command arguments and options. Basic Unix commands such as echo, printf, ls, who, date,passwd, cal, Combining commands. Meaning of Internal and external commands. The type command: knowing the type of a command and locating it. The root login. Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files. Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable. Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames. Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names. File related commands – cat, mv, rm, cp, wc and od commands **No. of Contact Sessions: 10**	http://www.ee.surrey.ac.uk/Teaching/Unix/unix1.html https://www.geeksforgeeks.org/introduction-to-unix-system/ https://www.youtube.com/watch?v=vLPtHRv8Y

2	23/10/21 To 12/11/21	**Module –2** **File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods. Recursively changing file permissions. Directory permissions. The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards. Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions. The grep, egrep. Typical examples involving different regular expressions. **Shell programming:** Ordinaryand environment variables. The. Profile. Read and readonly commands. Command line arguments. Exit and exit status of a command. Logical operators for conditional execution. The test command and its shortcut. The if, while, for and case control statements. The set and shift commands and handling positional parameters. The here (<<) document and trap command. Simple shell program examples **No. of Contact Sessions: 10**	https://www.tutorialspoint.com/unix/unix-file-permission.htm https://wiki.archlinux.org/title/File_permissions_and_attributes https://www.youtube.com/watch?v=XPbMN5ZoBkk
3	13/11/21 to 04/12/21	**Module –3** **UNIX File APIs:** General File APIs, File and Record Locking, Directory File APIs, Device File APIs, FIFO File APIs, Symbolic Link File APIs. UNIX Processes and Process Control **The Environment of a UNIX Process:** Introduction, main function, Process Termination, Command-Line Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork, exit, wait, waitpid, wait3, wait4 Functions, Race Conditions, exec Functions. **No. of Contact Sessions: 10**	https://www.slideshare.net/1997ssaini/unix-file-apis-167715909 https://en.wikipedia.org/wiki/File_system_API https://www.youtube.com/watch?v=NkXd23Dnf9
4	06/12/21 To 21/12/21	**Module–4** Changing User IDs and Group IDs, Interpreter Files, system Function, Process Accounting, User Identification, Process Times, I/O Redirection. **Overview of IPC Methods**, Pipes, popen, pclose Functions, Coprocesses, FIFOs, System V IPC, Message Queues, Semaphores. **Shared Memory**, Client-Server Properties, Stream Pipes, Passing File Descriptors, An Open Server-Version 1, Client-Server Connection Functions. **No. of Contact Sessions: 10**	https://www.geeksforgeeks.org/methods-in-interprocess-communication/ https://www.geeks99.com/inter-process-communication-ipc.html https://www.youtube.com/watch?v=6JaYIKfB8vw

5	24/12/21 to 15/01/22	**Module–5** **Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals, signal, Signal Mask, sigaction, The SIGCHLD Signal and the waitpid Function, The sigsetjmp and siglongjmp Functions, Kill, Alarm, Interval Timers, POSIX.lb Timers. Daemon Processes: Introduction, Daemon Characteristics, Coding Rules, Error Logging, Client-Server Model. **No. of Contact Sessions: 10**	http://www.math.uu.se/droc/exjobb/ISO9899-1/booksbandbook/basics-daemons.html https://www.scribd.com/document/58241374/Signals-and-Daemon-Processes-unix https://www.youtube.com/watch?v=2gHOqtOmw9w

Textbooks:

1. Sumitabha Das., Unix Concepts and Applications., 4thEdition., Tata McGraw Hill
   (Chapter 1,2 ,3,4,5,6,8,13,14)
2. W. Richard Stevens: Advanced Programming in the UNIX Environment, 2nd Edition, Pearson Education, 2005
   (Chapter 3,7,8,10,13,15)
3. Unix System Programming Using C++ - Terrence Chan, PHI, 1999.
   (Chapter 7,8,9,10).

Reference Books:

1. M.G. Venkatesh Murthy: UNIX & Shell Programming, Pearson Education.
2. Richard Blum , Christine Bresnahan : Linux Command Line and Shell Scripting Bible, 2nd Edition, Wiley,2014.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -JAN 2022) MACROSCHEDULE

SUBJECT	UNIX PROGRAMMING	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS56	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04/10/21	MON	**Introduction:** Unix Components/Architecture. Features of Unix/The root login	Covered	
2	05/10/21	TUE	The UNIX Environment and UNIX Structure Posix and Single Unix specification	Covered	
3	08/10/21	FRI	General features of Unix commands/ command structure. Command arguments and options	Covered	
4	09/10/21	SAT	Basic Unix commands such as echo, printf, ls, who, date,passwd, cal, Combining commands	Covered	
5	11/10/21	MON	. Meaning of Internal and external commands. The type command: knowing the type of a command and locating it	Covered	
6	12/10/21	TUE	Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files.	Covered	
7	16/10/21	SAT	Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable.	Covered	
8	18/10/21	MON	Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames.	Covered	
9	19/10/21	TUE	Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names.	Covered	
10	22/10/21	FRI	File related commands – cat, mv, rm, cp, wc and od commands	Covered	

SUMMARY

PLANNED DATE	FROM: 04/10/21	TO: 22/10/21	
ACTUAL CLASSES TAKEN	FROM:04/10/21	TO:22/10/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: —	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	23/10/21	SAT	**File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods.	Covered	
12	25/10/21	MON	Recursively changing file permissions. Directory permissions.	Covered	
13	26/10/21	TUE	The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards.	Covered	
14	29/10/21	FRI	Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions.	Covered.	
15	30/10/21	SAT	The grep, egrep. Typical examples involving different regular expressions	Covered	
16	02/11/21	TUE	**Shell programming:** Ordinary and environment variables. The. Profile. Read and readonly commands.	Covered	
17	06/11/21	SAT	Command line arguments. Exit and exit status of a command.	Covered	
18	08/11/21	MON	Logical operators for conditional execution. The test command and its shortcut	Covered	
19	09/11/21	TUE	The if, while, for and case control statements. The set and shift commands and handling positional parameters.	Covered	
20	12/11/21	FRI	The here (<<) document and trap command. Simple shell program examples	Covered	

SUMMARY

PLANNED DATE	**FROM: 23/10/21**	**TO: 12/11/21**	
ACTUAL CLASSES TAKEN	**FROM:23/10/21**	**TO:12/11/21**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:** Yes	**IA 2:** Yes	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** –	**QP DISCUSSION:** ✓
	QUIZ: –	**SEMINARS:**	**ANY OTHER:**

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	13/11/21	MON	**UNIX File APIs:** General File APIs,	Covered	
22	15/11/21	TUE	File and Record Locking,	Covered	
23	16/11/21	FRI	Directory File APIs, Device File APIs,	Covered	
24	23/11/21	SAT	FIFO File APIs, Symbolic Link File APIs	Covered	
25	26/11/21	MON	UNIX Processes and Process Control	Covered	
26	27/11/21	TUE	**The Environment of a UNIX Process:** Introduction, main function, Process Termination.	Covered	
27	29/11/21	SAT	Command-Line Arguments, Environment List, Memory Layout of a C Program,	Covered	
28	30/11/21	MON	Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions,	Covered	
29	03/12/21	TUE	, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork	Covered	
30	04/12/21	FRI	exit, wait, waitpid, wait3,wait4 Functions, Race Conditions, exec Functions	Covered	

SUMMARY

PLANNED DATE	**FROM: 13/11/21**	**TO:04/12/21**	
ACTUAL CLASSES TAKEN	**FROM:13/11/21**	**TO:04/12/21**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** —	**QP DISCUSSION:** ✓
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	06/12/21	SAT	Changing User IDs and Group IDs, Interpreter Files	Covered	
32	07/12/21	MON	system Function, Process Accounting	Covered	
33	10/12/21	TUE	User Identification, Process Times, I/O Redirection.	Covered	
34	11/12/21	FRI	**Overview of IPC Methods**, Pipes, popen, pclose	Covered	
35	13/12/21	SAT	Functions, Coprocesses, FIFOs,	Covered	
36	14/12/21	TUE	System V IPC, Message Queues, Semaphores.	Covered	
37	17/12/21	SAT	**Shared Memory**, Client-Server Properties, Stream Pipes,	Covered	
38	18/12/21	MON	Passing File Descriptors,	Covered	
39	20/12/21	TUE	An Open Server-Version 1	Covered	
40	21/12/21	FRI	Client-Server Connection Functions.	Covered	

SUMMARY

PLANNED DATE	**FROM:06/12/21**	**TO: 21/12/21**	
ACTUAL CLASSES TAKEN	**FROM:06/12/21**	**TO:21/12/21**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** Yes
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** —	**QP DISCUSSION:** ✓
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	24/12/21	MON	**Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals	Covered	
42	31/12/21	TUE	, signal, Signal Mask, sigaction	Covered	
43	01/01/22	SAT	The SIGCHLD Signal and the waitpid Function,	Covered	
44	03/01/22	MON	The sigsetjmp and siglongjmp Functions,	Covered	
45	04/01/22	TUE	Kill, Alarm, Interval Timers	Covered	
46	07/01/22	FRI	POSIX.1b Timers.	Covered	
47	08/01/22	SAT	Daemon Processes: Introduction	Covered	
48	10/01/22	MON	Daemon Characteristics,	Covered	
49	11/01/22	TUE	Coding Rules, Error Logging.	Covered	
50	15/01/22	SAT	Client-Server Model.	Covered	
51	17/01/22 to 31/01/22		Revision	Covered	

SUMMARY

PLANNED DATE	**FROM: 24/12/21**	**TO: 15/01/22**	
ACTUAL CLASSES TAKEN	**FROM:24/12/21**	**TO:15/01/22**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** —	**QP DISCUSSION:** ✓
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -JULY 2021) MACROSCHEDULE

SUBJECT	USER INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	17CS832	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Design the User Interface, design, menu creation ,windows creation and connection between menus and windows.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 04.05.2021	**Module –1** The User Interface-Introduction, Overview, The importance of user interface –Defining the user interface, The importance of Good design, Characteristics ofgraphical and web user interfaces, Principles of user interface design. **No. of Contact Sessions: 10**	Introduction to User Interface Design - User Interface (UI) Design - Startup Guide By NavanIBheda - YouTube
2	05.05.2021 To 19.05.2021	**Module –2** The User Interface Design process- Obstacles, Usability, Human characteristics in Design, Human Interaction speeds, Business functions-Business definition and requirement analysis, Basic business functions, Design standards. **No. of Contact Sessions: 10**	user interface design | software engineering | - YouTube User Interface Design - Basic Concepts, Types of User Interface - YouTube
3	20.05.2021 to 02.06.2021	**Module –3** System menus and navigation schemes- Structures of menus, Functions of menus, Contents of menus, Formatting of menus, Phrasing the menu, Selectingmenu choices, Navigating menus, Kinds of graphical menus. **No. of Contact Sessions: 10**	Structures of menus / functions of menus / User Interface Design (17CS832) - YouTube
4	03.06.2021 To 16.06.2021	**Module–4** Windows - Characteristics, Components of window, Window presentationstyles, Types of window, Window management, Organizing window functions,Window operations, Web systems, Characteristics of device based controls. **No. of Contact Sessions: 10**	Human characteristics in UI design/User Interface design (17CS832) 8th sem CSE/VTU - YouTube

5	17.06.2021 to 30.06.2021	**Module–5** Screen based controls- Operable control, Text control, Selection control,Custom control, Presentation control, Windows Tests-prototypes, kinds of tests. **No. of Contact Sessions: 10**	Lecture 36 Screen Based Controls Part 1 Button - YouTube

Textbooks:

Wilbert O. Galitz, "The Essential Guide to User Interface Design", John Wiley &Sons, Second Edition 2002.

Reference Books:

1. Ben Sheiderman, "Design the User Interface", Pearson Education, 1998.
2. Alan Cooper, "The Essential of User Interface Design", Wiley- Dream Tech Ltd.,2002

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LESSON PLAN (APR 2021 -July 2021) MACRO SCHEDULE

SUBJECT	USER INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	17CS832	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Design the User Interface, design, menu creation ,windows creation and connection between menus and windows.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 07.05.2021	**Module –1** The User Interface-Introduction, Overview, The importance of user interface –Defining the user interface, The importance of Good design, Characteristics of graphical and web user interfaces, Principles of user interface design. **No. of Contact Sessions: 10**	Introduction to User Interface Design - User Interface (UI) Design - Startup Guide By Nayan Bheda - YouTube
2	05.05.2021 To 17.05.2021	**Module –2** The User Interface Design process- Obstacles, Usability, Human characteristics in Design, Human Interaction speeds, Business functions-Business definition and requirement analysis, Basic business functions, Design standards. **No. of Contact Sessions: 10**	user interface design	software engineering	- YouTube User Interface Design - Basic Concepts, Types of User Interface - YouTube
3	20.05.2021 to 02.06.2021	**Module –3** System menus and navigation schemes- Structures of menus, Functions of menus, Contents of menus, Formatting of menus, Phrasing the menu, Selecting menu choices, Navigating menus, Kinds of graphical menus. **No. of Contact Sessions: 10**	Structures of menus / functions of menus / User Interface Design (17CS832) - YouTube
4	03.06.2021 To 16.06.2021	**Module–4** Windows - Characteristics, Components of window, Window presentation styles, Types of window, Window management, Organizing window functions,Window operations, Web systems, Characteristics of device based controls. **No. of Contact Sessions: 10**	Human characteristics in UI design/ User Interface design (17CS832) /8th sem CSE/VTU - YouTube

5	17.05.2021 to 20.07.2022	**Module–5** Screen based controls- Operable control, Text control, Selection control, Custom control, Presentation control, Windows Tests-prototypes, kinds of tests. **No. of Contact Sessions: 10**	Lecture 36 Screen Based Controls Part 1 Button - YouTube

Textbooks:

Wilbert O. Galitz, "The Essential Guide to User Interface Design", John Wiley & Sons, Second Edition 2002.

Reference Books:

1. Ben Sheiderman, "Design the User Interface", Pearson Education, 1998.
2. Alan Cooper, "The Essential of User Interface Design", Wiley- Dream Tech Ltd.,2002

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -JULY2021) MICROSCHEDULE

SUBJECT	USER INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	17CS832	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	The User Interface-Introduction	completed	
2	20/04/21	TUE	Overview, The importance of user interface	Completed	
3	21/04/21	WED	Overview, The importance of user interface cont....	Completed	
4	22/04/21	THU	Defining the user interface	Completed	
5	26/04/21	MON	The importance of Good design	Completed	
6	27/04/21	TUE	The importance of Good design	Completed	
7	28/04/21	WED	Characteristics ofgraphical and web user interfaces	Completed	
8	29/04/21	THU	Characteristics ofgraphical and web user interfaces cont....	completed	
9	03/05/21	MON	Principles of user interface design	Completed	
10	04/05/21	TUE	Principles of user interface design.	Completed	

SUMMARY

PLANNED DATE	FROM: 19.04.2021	TO: 04.05.2021	
ACTUAL CLASSES TAKEN	FROM:19.04.2021	TO:04.05.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: -	IA 3: -
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: -	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	05/05/21	WED	The User Interface Design process-Obstacles	Completed	
12	06/05/21	THU	Usability	Completed	
13	07/05/21	MON	Human characteristics in Design	Completed	
14	10/05/21	TUE	Human Interaction speeds	Completed	
15	11/05/21	WED	Business functions-Business definition and requirement analysis	Completed	
16	12/05/21	THU	Business functions-Business definition and requirement analysis cont…	Completed	
17	13/05/21	MON	Basic business functions	Completed	
18	17/05/21	TUE	Basic business functions cont…	Completed	
19	18/05/21	WED	Design standards.	Completed	
21	19/05/21	THU	Design standards cont…..	Completed	

SUMMARY

PLANNED DATE	FROM: 05.05.2021	TO: 19.05.2021	
ACTUAL CLASSES TAKEN	FROM:05.05.2021	TO:19.05.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: Yes	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	20/05/21	MON	System menus and navigation schemes-. . . . . Kinds of graphical menus.	Completed	
22	21/05/21	TUE	Structures of menus	Completed	
23	24/05/21	WED	Functions of menus	Completed	
24	25/05/21	THU	Contents of menus	Completed	
25	26/05/21	MON	Formatting of menus	Completed	
26	27/05/21	TUE	Phrasing the menu	Completed	
27	28/05/21	WED	Selectingmenu choices	Completed	
28	31/05/21	THU	Navigating menus	Completed	
29	01/06/21	MON	Kinds of graphical menus.	Completed	
30	02/06/21	TUE	Kinds of graphical menus cont.....	Completed	

SUMMARY

PLANNED DATE	FROM: 20.05.2021	TO:02.06.2021	
ACTUAL CLASSES TAKEN	FROM:20.05.2021	TO:02.06.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: —	IA 2: Yes	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	03/06/21	THU	Windows - Characteristics	Completed	
32	04/06/21	MON	Components of window	Completed	
33	07/06/21	TUE	Window presentationstyles	Completed	
34	08/06/21	WED	Types of window	Completed	
35	09/06/21	THU	Window management	Completed	
36	10/06/21	TUE	Organizing window functions	completed	
37	11/06/21	WED	Window operations	Completed	
38	14/06/21	THU	Web systems	Completed	
39	15/06/21	WED	Characteristics of device based controls	Completed	
40	16/06/21	THU	Characteristics of device based controls cont...	completed.	

SUMMARY

PLANNED DATE	FROM:03.06.2021	TO: 16.06.2021	
ACTUAL CLASSES TAKEN	FROM:03.06.2021	TO:16.06.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: —	IA 2: Yes	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	17/06/21	MON	Screen based controls- Operable control	Completed	
42	18/06/21	TUE	Screen based controls- Operable control cont...	Completed	
43	21/06/21	WED	Text control	Completed	
44	22/06/21	THU	Selection control	Completed	
45	23/06/21	TUE	Custom control	Completed	
46	24/06/21	WED	Presentation control	Completed	
47	25/06/21	THU	Presentation control cont...	Completed	
48	28/06/21	MON	Windows Tests-prototypes	Completed	
49	29/06/21	TUE	kinds of tests	Completed	
50	30/06/21	WED	kinds of tests cont....	Completed	
51-64	01/07/21-20/07/21	Revision		Completed.	

SUMMARY

PLANNED DATE	FROM: 17.06.2021	TO: 30.06.2021	
ACTUAL CLASSES TAKEN	FROM:17.06.2021	TO:30.06.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: —	IA 2: —	IA 3: yes.
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: IA3
	QUIZ:	SEMINARS:	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -JULY2021) MICROSCHEDULE

SUBJECT	UNIX PROGRAMMING	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS56	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	**Introduction:** Unix Components/Architecture. Features of UnixThe root login	covered	
2	20/04/21	TUE	The UNIX Environment and UNIX Structure Posix and Single Unix specification	Covered	
3	21/04/21	WED	General features of Unix commands/ command structure. Command arguments and options	Covered	
4	22/04/21	THU	Basic Unix commands such as echo, printf, ls, who, date,passwd, cal, Combining commands	Covered	
5	26/04/21	MON	. Meaning of Internal and external commands. The type command: knowing the type of a command and locating it	Covered	
6	27/04/21	TUE	Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files.	Covered	
7	28/04/21	WED	Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable.	Covered	
8	29/04/21	THU	Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames.	Covered	
9	03/05/21	MON	Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names.	Covered	
10	04/05/21	TUE	File related commands – cat, mv, rm, cp, wc and od commands	Covered	

SUMMARY

PLANNED DATE	FROM: 19.04.2021	TO: 04.05.2021	
ACTUAL CLASSES TAKEN	FROM: 19.04.2021	TO: 04.05.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	05/05/21	WED	**File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods.	Covered	
12	06/05/21	THU	Recursively changing file permissions. Directory permissions.	Covered	
13	07/05/21	MON	The shells interpretive cycle. Wild cards. Removing the special meanings of wild cards.	Covered	
14	10/05/21	TUE	Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions.	Covered	
15	11/05/21	WED	The grep, egrep. Typical examples involving different regular expressions	Covered	
16	12/05/21	THU	**Shell programming:** Ordinary and environment variables. The. Profile. Read and readonly commands.	Covered	
17	13/05/21	MON	Command line arguments. Exit and exit status of a command.	Covered	
18	17/05/21	TUE	Logical operators for conditional execution. The test command and its shortcut	Covered	
19	18/05/21	WED	The if, while, for and case control statements. The set and shift commands and handling positional parameters.	Covered	
20	19/05/21	THU	The here (<<) document and trap command. Simple shell program examples	Covered	

SUMMARY

PLANNED DATE	**FROM: 05.05.2021**	**TO: 19.05.2021**	
ACTUAL CLASSES TAKEN	**FROM: 05.05.2021**	**TO:19.05.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** –	**QP DISCUSSION:** ✓
	QUIZ: –	**SEMINARS:** –	**ANY OTHER:** ✓

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MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	20/05/21	MON	**UNIX File APIs:** General File APIs,	Covered	
22	21/05/21	TUE	File and Record Locking,	Covered	
23	24/05/21	WED	Directory File APIs, Device File APIs,	Covered	
24	25/05/21	THU	FIFO File APIs, Symbolic Link File APIs	Covered	
25	26/05/21	MON	UNIX Processes and Process Control	Covered	
26	27/05/21	TUE	**The Environment of a UNIX Process:** Introduction, main function, Process Termination.	Covered	
27	28/05/21	WED	Command-Line Arguments, Environment List, Memory Layout of a C Program,	Covered	
28	31/05/21	THU	Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions,	Covered	
29	01/06/21	MON	, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork	Covered	
30	02/06/21	TUE	exit, wait, waitpid, wait3,wait4 Functions, Race Conditions, exec Functions	Covered	

SUMMARY

PLANNED DATE	**FROM: 20.05.2021**	**TO:02.06.2021**	
ACTUAL CLASSES TAKEN	**FROM: 20.05.2021**	**TO: 02.06.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** —	**QP DISCUSSION:** ✓
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
31	03/06/21	THU	Changing User IDs and Group IDs, Interpreter Files	Covered	
32	04/06/21	MON	system Function, Process Accounting	Covered	
33	07/06/21	TUE	User Identification, Process Times, I/O Redirection.	Covered	
34	08/06/21	WED	**Overview of IPC Methods**, Pipes, popen, pclose	Covered	
35	09/06/21	THU	Functions, Coprocesses, FIFOs.	Covered	
36	10/06/21	TUE	System V IPC, Message Queues, Semaphores.	Covered	
37	11/06/21	WED	**Shared Memory**, Client-Server Properties, Stream Pipes.	Covered	
38	14/06/21	THU	Passing File Descriptors,	Covered	
39	15/06/21	WED	An Open Server-Version 1	Covered	
40	16/06/21	THU	Client-Server Connection Functions.	Covered	

SUMMARY

PLANNED DATE	**FROM:03.06.2021**	**TO: 16.06.2021**	
ACTUAL CLASSES TAKEN	**FROM: 03.06.2021**	**TO: 16.06.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** ✓	**QP DISCUSSION:** ✓
	QUIZ: ✓	**SEMINARS:** ✓	**ANY OTHER:** ✓

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
41	17/06/21	MON	**Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals	Covered	
42	18/06/21	TUE	, signal, Signal Mask, sigaction	Covered	
43	21/06/21	WED	The SIGCHLD Signal and the waitpid Function,	Covered	
44	22/06/21	THU	The sigsetjmp and siglongjmp Functions,	Covered	
45	23/06/21	TUE	Kill, Alarm, Interval Timers	Covered	
46	24/06/21	WED	POSIX.1b Timers.	Covered	
47	25/06/21	THU	Daemon Processes: Introduction	Covered	
48	28/06/21	MON	Daemon Characteristics,	Covered	
49	29/06/21	TUE	Coding Rules, Error Logging.	Covered	
50	30/06/21	WED	Client-Server Model.	Covered	

SUMMARY

PLANNED DATE	**FROM: 17.06.2021**	**TO: 30.06.2021**	
ACTUAL CLASSES TAKEN	**FROM: 17.06.2021**	**TO: 30.06.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** —	**QP DISCUSSION:** ✓
	QUIZ: —	**SEMINARS:**	**ANY OTHER:** —

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -FEB 2022) MACRO SCHEDULE

SUBJECT	UNIX PROGRAMMING	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS56	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Explain Unix Architecture, File system and use of Basic Commands
- Illustrate Shell Programming and to write Shell Scripts
- Categorize, compare and make use of Unix System Calls
- Build an application/service over a Unix system.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 04.05.2021	**Module –1** **Introduction:** Unix Components/Architecture. Features of Unix. The UNIX Environment and UNIX Structure. Posix and Single Unix specification. General features of Unix commands/ command structure. Command arguments and options. Basic Unix commands such as echo, printf, ls, who, date,passwd, cal, Combining commands. Meaning of Internal and external commands. The type command; knowing the type of a command and locating it. The root login. Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files. Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable. Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames. Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names. File related commands – cat, mv, rm, cp, wc and od commands **No. of Contact Sessions: 10**	http://www.ee.surrey.ac.uk/Teaching/Unix/unix1.html https://www.guru99.com/introduction-to-unix-linux.html https://www.youtube.com/watch?v=yLP48u9vr9Y

2	05.05.2021 To 19.05.2021	**Module –2** **File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods. Recursively changing file permissions. Directory permissions. The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards. Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions. The grep, egrep. Typical examples involving different regular expressions. **Shell programming:** Ordinary and environment variables. The. Profile. Read and readonly commands. Command line arguments. Exit and exit status of a command. Logical operators for conditional execution. The test command and its shortcut. The if, while, for and case control statements. The set and shift commands and handling positional parameters. The here (<<) document and trap command. Simple shell program examples **No. of Contact Sessions: 10**	https://www.tutorialspoint.com/unix/unix-file-permission.htm https://wiki.archlinux.org/title/File_permissions_and_attributes https://www.youtube.com/watch?v=XPbMWZc1KLk
3	20.05.2021 to 02.06.2021	**Module –3** **UNIX File APIs:** General File APIs, File and Record Locking, Directory File APIs, Device File APIs, FIFO File APIs, Symbolic Link File APIs. UNIX Processes and Process Control **The Environment of a UNIX Process:** Introduction, main function, Process Termination, Command-Line Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork, exit, wait, waitpid, wait3, wait4 Functions, Race Conditions, exec Functions. **No. of Contact Sessions: 10**	https://www.slideshare.net/1997yuni/unix-file-apis-16221500 https://en.wikipedia.org/wiki/File_system_API https://www.youtube.com/watch?v=SkSX025YBn0
4	03.06.2021 To 16.06.2021	**Module–4** Changing User IDs and Group IDs, Interpreter Files, system Function, Process Accounting, User Identification, Process Times, I/O Redirection. **Overview of IPC Methods**, Pipes, popen, pclose Functions, Coprocesses, FIFOs, System V IPC, Message Queues, Semaphores. **Shared Memory,** Client-Server Properties, Stream Pipes, Passing File Descriptors, An Open Server-Version 1, Client-Server Connection Functions. **No. of Contact Sessions: 10**	https://www.geeksforgeeks.org/methods-in-interprocess-communication/ https://www.geeksforgeeks.org/inter-process-communication-ipc.html https://www.youtube.com/watch?v=dAsVK0B8vss

5	17.06.2021 to 30.06.2021	**Module–5** **Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals, signal, Signal Mask, sigaction, The SIGCHLD Signal and the waitpid Function, The sigsetjmp and siglongjmp Functions, Kill, Alarm, Interval Timers, POSIX.1b Timers. Daemon Processes: Introduction, Daemon Characteristics, Coding Rules, Error Logging, Client-Server Model. **No. of Contact Sessions: 10**	http://www.mqth.nic.in/docum_US/ISO8859-1/html/handbook/basics-daemons.html https://www.scribd.com/document/58241074/Signals-and-Daemon-Processes-unix https://www.youtube.com/watch?v=2qEDqtOmeWo

Textbooks:

1. Sumitabha Das., Unix Concepts and Applications., 4thEdition., Tata McGraw Hill
   (Chapter 1,2 ,3,4,5,6,8,13,14)
2. W. Richard Stevens: Advanced Programming in the UNIX Environment, 2nd Edition, Pearson Education, 2005
   (Chapter 3,7,8,10,13,15)
3. Unix System Programming Using C++ - Terrence Chan, PHI, 1999.
   (Chapter 7,8,9,10).

Reference Books:

1. M.G. Venkatesh Murthy: UNIX & Shell Programming, Pearson Education.
2. Richard Blum , Christine Bresnahan : Linux Command Line and Shell Scripting Bible, 2nd Edition, Wiley,2014.

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TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -JAN 2022) MICRO SCHEDULE

SUBJECT	**USER INTERFACE DESIGN**	**STAFF NAME**	**BASAVESHA D**
SUBJECT CODE	**18CS734**	**SEM/SEC**	**VII**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	The User Interface-Introduction	Covered	
2	07/10/21	THU	Overview, The importance of user interface	Covered	
3	09/10/21	SAT	Overview, The importance of user interface cont....	Covered	
4	12/10/21	TUE	Defining the user interface	Covered	
5	13/10/21	WED	The importance of Good design	Covered	
6	16/10/21	SAT	The importance of Good design	Covered	
7	19/10/21	TUE	Characteristics of graphical and web user interfaces	Covered	
8	21/10/21	THU	Characteristics of graphical and web user interfaces cont...	Covered	
9	23/10/21	SAT	Principles of user interface design	Covered	
10	26/10/21	TUE	Principles of user interface design.	Covered	

SUMMARY

PLANNED DATE	**FROM: 05.10.2021**	**TO: 26.10.2021**	
ACTUAL CLASSES TAKEN	**FROM: 05.10.2021**	**TO: 26.10.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:** Yes	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:**	**QP DISCUSSION:** Yes
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	27/10/21	WED	The User Interface Design process-Obstacles	Covered	
12	28/10/21	THU	Usability	Covered	
13	30/10/21	SAT	Human characteristics in Design	Covered	
14	02/11/21	TUE	Human Interaction speeds	Covered	
15	04/11/21	THU	Business functions-Business definition and requirement analysis	Covered	
16	06/11/21	SAT	Business functions-Business definition and requirement analysis cont....	Covered	
17	09/11/21	TUE	Basic business functions	Covered	
18	10/11/21	WED	Basic business functions cont....	Covered	
19	11/11/21	THU	Design standards.	Covered	
20	13/11/21	SAT	Design standards cont.....	Covered	

SUMMARY

PLANNED DATE	FROM: 27.10.2021	TO: 13.11.2021	
ACTUAL CLASSES TAKEN	FROM: 27.10.2021	TO: 13.11.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: '	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	16/11/21	TUE	System menus and navigation schemes-. . . . . Kinds of graphical menus.	Covered	
22	17/11/21	WED	Structures of menus	Covered	
23	23/11/21	TUE	Functions of menus	Covered	
24	24/11/21	WED	Contents of menus	Covered	
25	25/11/21	THU	Formatting of menus	Covered	
26	27/11/21	SAT	Phrasing the menu	Covered	
27	01/12/21	WED	Selecting menu choices	Covered	
28	02/12/21	THU	Navigating menus	Covered	
29	04/12/21	SAT	Kinds of graphical menus.	Covered	
30	07/12/21	TUE	Kinds of graphical menus cont.....	Covered	

SUMMARY

PLANNED DATE	FROM: 16.11.2021	TO:07.12.2021	
ACTUAL CLASSES TAKEN	FROM: 16.11.2021	TO: 07.12.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:✓	TUTORIALS: —	QP DISCUSSION: ✓
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	08/12/21	WED	Windows - Characteristics	Covered	
32	09/12/21	THU	Components of window	Covered	
33	11/12/21	SAT	Window presentation styles	Covered	
34	14/12/21	TUE	Types of window	Covered	
35	15/12/21	WED	Window management	Covered	
36	16/12/21	THU	Orgnizing window functions	Covered	
37	18/12/21	SAT	Window operations	Covered	
38	21/12/21	TUE	Web systems	Covered	
39	22/12/21	WED	Characteristics of device based controls	Covered	
40	23/12/21	THU	Characteristics of device based controls cont...	Covered	

SUMMARY

PLANNED DATE	FROM:08.12.2021	TO: 23.12.2021	
ACTUAL CLASSES TAKEN	FROM: 08.12.2021	TO: 23.12.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	30/12/21	THU	Screen based controls- Operable control	Covered	
42	01/01/22	SAT	Screen based controls- Operable control cont....	Covered	
43	04/01/22	TUE	Text control	Covered	
44	05/01/22	WED	Selection control	Covered	
45	06/01/22	THU	Custom control	Covered	
46	08/01/22	SAT	Presentation control	Covered	
47	11/01/22	TUE	Presentation control cont…	Covered	
48	12/01/22	WED	Windows Tests-prototypes	Covered	
49	13/01/22	THU	kinds of tests	Covered	
50	15/01/22	SAT	kinds of tests cont....	Covered	
51-56	18/01/22 To 31/01/2022	Revision		Covered	

SUMMARY

PLANNED DATE	FROM: 30.12.2021	TO: 15.01.2022	
ACTUAL CLASSES TAKEN	FROM: 30.12.2021	TO: 15.01.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: —	QP DISCUSSION: ✓
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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20-21 - ODD

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEP-JAN 2020-21) MICRO SCHEDULE

ODD 20 -21

SUBJECT	DATABASE MANAGEMENT SYSTEM	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS53	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	02/09/20	MON	Module-1: Introduction to Databases: Introduction,	Covered	
2	03/09/20	WED	Characteristics of database approach, Advantages of using the DBMS approach,	Covered	
3	04/09/20	THU	History of database applications. Overview of Database Languages and Architectures	Covered	
4	07/09/20	FRI	Data Models, Schemas, and Instances	Covered	
5	09/09/20	MON	Three schema architecture and data independence,	Covered	
6	10/09/20	WED	database languages, and interfaces,	Covered	
7	11/09/20	THU	The Database System environment.	Covered	
8	14/09/20	FRI	Conceptual Data Modelling using Entities and Relationships	Covered	
9	16/09/20	MON	Entity types, Entity sets, attributes, roles, and structural constraints,	Covered	
10	17/09/20	WED	Weak entity types, ER diagrams	Covered	
11	18/09/20	THU	examples, Specialization and Generalization	Covered	

SUMMARY

PLANNED DATE	FROM: 02/09/20	TO: 18/10/20	
ACTUAL CLASSES TAKEN	FROM: 02/09/20	TO 17/9/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Sathan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	18/09/20	FRI	Relational Model: Relational Model Concepts,	Covered	
13	21/09/20	MON	Relational Model Constraints and relational database schemas	Covered	
14	23/09/20	WED	Update operations, transactions, and dealing with constraint violations.	Covered	
15	24/09/20	THU	Relational Algebra: Unary and Binary relational operations	Covered	
16	25/09/20	FRI	additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra	Covered	
17	28/09/20	MON	Mapping Conceptual Design into a Logical Design	Covered	
18	30/09/20	WED	Relational Database Design using ER-to-Relational mapping.	Covered	
19	01/10/20	THU	SQL: SQL data definition and data types, specifying constraints in SQL	Covered	
20	02/10/20	FRI	retrieval queries in SQL, INSERT,	Covered	
21	05/10/20	MON	DELETE, and UPDATE statements in SQL	Covered	
22	07/10/20	WED	Additional features of SQL	Covered	

SUMMARY

PLANNED DATE	FROM: 18/09/20	TO: 07/10/20	
ACTUAL CLASSES TAKEN	FROM: 18/09/20	TO: 07/10/20	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓ (Tot)	IA 2: ✓ (Tot)	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suhas R
Staff Incharge

Prof. C.Y Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	08/10/20	THU	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries.	Covered	
24	09/10/20	FRI	Specifying constraints as assertions and action triggers.	Covered	
25	12/10/20	MON	Views in SQL, Schema change statements in SQL.	Covered	
26	14/10/20	WED	Database Application Development:.	Covered	
27	15/10/20	THU	Accessing databases from applications	Covered	
28	16/10/20	FRI	An introduction to JDBC,	Covered	
29	19/10/20	MON	JDBC classes and interfaces.	Covered	
30	21/10/20	WED	SQLJ, Stored procedures, Case study:	Covered	
31	22/10/20	THU	The internet Bookshop, Internet Applications:	Covered	
32	23/10/20	FRI	The three-Tier application architecture.	Covered	
33	26/10/20	MON	The presentation layer, The Middle Tier	Covered	

SUMMARY

PLANNED DATE	**FROM:** 08/10/20	**TO:** 26/10/20	
ACTUAL CLASSES TAKEN	**FROM:** 08/10/20	**TO:** 26/10/20	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal PRINCIPAL
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MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
34	28/10/20	WED	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies	Covered	
35	29/10/20	THU	Informal design guidelines for relation schema, Functional Dependencies	covered	
36	30/10/20	FRI	Normal Forms based on Primary Keys, Second and Third Normal Forms,	covered	
37	02/11/20	MON	Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form,	covered	
38	04/11/20	WED	Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules,	covered	
39	05/11/20	THU	Equivalence, and Minimal Cover, Properties of Relational Decompositions,	covered	
40	06/11/20	FRI	Algorithms for Relational Database Schema Design	covered	
41	09/11/20	MON	Nulls, Dangling tuples,	covered	
42	11/11/20	WED	alternate Relational Designs	covered	
43	12/11/20	THU	Further discussion of Multivalued dependencies and 4NF	covered	
44	13/11/20	FRI	Other dependencies and Normal Forms	covered	

SUMMARY

PLANNED DATE	**FROM:** 28/10/20	**TO:** 13/11/20	
ACTUAL CLASSES TAKEN	**FROM:** 29/10/20	**TO:** 13/11/20	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓ (Sol.)	**IA 3:** ✓ (Sol.)
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suthan R
Staff Incharge

Prof. C.V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572105.

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
45	16/11/20	MON	**Module -5** Transaction Processing: Introduction to Transaction Processing,	Covered	
46	18/11/20	TUE	Transaction and System concepts, Desirable properties of Transactions,	Covered	
47	19/11/20	WED	Characterizing schedules based on recoverability, Characterizing schedules based on Serializability	Covered	
48	20/11/20	THU	Transaction support in SQL. Concurrency Control in Databases	Covered	
49	23/11/20	MON	Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering,	Covered	
50	25/11/20	TUE	Multiversion Concurrency control techniques, Validation Concurrency control techniques,	Covered	
51	26/11/20	WED	Granularity of Data items and Multiple Granularity Locking	Covered	
52	27/11/20	THU	Introduction to Database Recovery Protocols: Recovery Concepts,	Covered	
53	27/11/20	MON	NO-UNDO/REDO recovery based on Deferred update,	Covered	EXTRA
54	30/11/20	TUE	Recovery techniques based on immediate update,	Covered	
55	30/11/20	WED	Shadow paging, Database backup and recovery from catastrophic failures	Covered	EXTRA

SUMMARY

PLANNED DATE	**FROM:** 16/11/20	**TO:** 30/11/20	
ACTUAL CLASSES TAKEN	**FROM:** 16/11/20	**TO:** 30/11/20	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Sthan R
Staff Incharge

Prof. C. V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PrincipalPRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEP-JAN 2020-21) MACRO SCHEDULE

SUBJECT	DATABASE MANAGEMENT SYSTEM	STAFF NAME	Mr SUTHAN R
SUBJECT CODE	18CS53	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
- Use Structured Query Language (SQL) for database manipulation
- Design and build simple database systems
- Develop application to interact with databases

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	02.09.2020 to 18.09.2020	**Module-1:** Introduction to Databases: Introduction, Characteristics of database approach, Advantages of using the DBMS approach, History of database applications. Overview of Database Languages and Architectures: Data Models, Schemas, and Instances. Three schema architecture and data independence, database languages, and interfaces, The Database System environment. Conceptual Data Modelling using Entities and Relationships: Entity types, Entity sets, attributes, roles, and structural constraints, Weak entity types, ER diagrams, examples, Specialization and Generalization **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Introduction+to+Database
2	18.09.2020 to 07.10.2020	**Module-2** Relational Model: Relational Model Concepts, Relational Model Constraints and relational database schemas. Update operations, transactions, and dealing with constraint violations. Relational Algebra: Unary and Binary relational operations, additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra. Mapping Conceptual Design into a Logical Design: Relational Database Design using ER-to-Relational mapping. SQL: SQL data definition and data types, specifying constraints in SQL, retrieval queries in SQL, INSERT, DELETE, and UPDATE statements in SQL. Additional features of SQL. **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Relational+Model

3	08.10.2020 to 26.10.2020	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries, Specifying constraints as assertions and action triggers, Views in SQL, Schema change statements in SQL. Database Application Development: Accessing databases from applications, An introduction to JDBC, JDBC classes and interfaces, SQLJ, Stored procedures, Case study: The internet Bookshop. Internet Applications: The three-Tier application architecture, The presentation layer, The Middle Tier **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=SQL
4	28.10.2020 to 13.11.2020	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies: Informal design guidelines for relation schema, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms, Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form, Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decompositions, Algorithms for Relational Database Schema Design, Nulls, Dangling tuples, and alternate Relational Designs, Further discussion of Multivalued dependencies and 4NF, Other dependencies and Normal Forms **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Normalization
5	16.11.2020 to 30.11.2020	**Module -5** Transaction Processing: Introduction to Transaction Processing, Transaction and System concepts, Desirable properties of Transactions, Characterizing schedules based on recoverability, Characterizing schedules based on Serializability, Transaction support in SQL. Concurrency Control in Databases: Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques, Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking. Introduction to Database Recovery Protocols: Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update, Recovery techniques based on immediate update, Shadow paging, Database backup and recovery from catastrophic failures **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Transaction+Processing

TEXT BOOKS:

1. **Fundamentals of Database Systems, Ramez Elmasri and Shamkant B. Navathe, 7th Edition, 2017,**
2. **Pearson. 2. Database management systems, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill**

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.

2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design, Implementation and Management, Cengage Learning 2012.

Suhan R
Staff Incharge

Prof. C.V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PrincipPRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

2021-Even

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2021) MACROSCHEDULE

EVEN 20-21

SUBJECT	**DESIGN AND ANALYSIS OF ALGORITHMS**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS42**	**SEM/SEC**	**IV**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

CO1: Describe computational solution to well known problems like searching, sorting etc.
CO2: Estimate the computational complexity of different algorithms.
CO3: Devise an algorithm using appropriate design strategies for problem solving

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	20.04.2021 to 11.05.2021	**Module- 1** **Introduction:** What is an Algorithm? ,Algorithm Specification , Analysis Framework , **Performance Analysis:** Space complexity, Time complexity. **Asymptotic Notations:** Big-Oh notation (*O*), Omega notation (*Ω*), Theta notation (Q), andLittle-oh notation (*o*), Mathematical analysis of Non-Recursive and recursive Algorithms with Examples. **Important Problem Types:** Sorting, Searching, String processing, Graph Problems, Combinatorial Problems. **Fundamental Data Structures:** Stacks, Queues, Graphs, Trees, Sets and Dictionaries. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=0IAPZzGSbME&list=PLfJ9N4rrI48XKpZkf8S0YFI-029olTrx_O https://www.youtube.com/watch?v=GQNTBvSrKhE&list=PLrjkTnl3Unu8w-GQvNhpIrnm3ghoo8CXC&ml https://www.youtube.com/watch?v=twE1r6O7gEE&list=PLbZsKqOn2AId_1GaJWB8amWOWBhEM7WW
2.	13.05.2021 to 03.06.2021	**Module -2** **Divide and Conquer**: General method, Binary search, Recurrence equation for divide andconquer, Finding the maximum and minimum , Merge sort, Quick sort, Strassen's matrix multiplication , Advantages and Disadvantages of divide and conquer. **Decrease and Conquer Approach:** Topological Sort. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=2Rr2tW9zvRg https://www.youtube.com/watch?v=YAE1FsYGotA https://www.youtube.com/watch?v=PfEmdF07S4w

3.	04.06.2021 to 24.06.2021	**Module -3** **Greedy Method:** General method, Coin Change Problem, Knapsack Problem, Jobsequencing with deadlines. **Minimum cost spanning trees:** Prim'sAlgorithm, Kruskal's Algorithm. **Single source shortest paths:** DijkstraAlgorithm .**Optimal Tree problem:** Huffman Trees and Codes .**Transform and Conquer Approach:** Heaps and Heap Sort . **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=ARvQeqJ_-NY https://www.youtube.com/watch?v=fMOpX3q9SJI https://www.youtube.com/watch?v=4QNT0v5zKhE&list=PLrjkTql3jnm8wGQyNhgslnnm2gkoa8CXCml
4.	25.06.2021 to 15.07.2021	**Module -4** **Dynamic Programming:** General method with Examples, Multistage Graphs . **Transitive Closure:** Warshall's Algorithm, **All Pairs Shortest Paths:** Floyd's Algorithm, Optimal Binary Search Trees, Knapsack problem , Bellman-FordAlgorithm , Travelling Sales Person problem , Reliability design. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLfUL0vhr0tE83NKhnq7acXY1eA0o1dXh https://www.youtube.com/watch?v=IVR2u9IrcI8&list=PLdo5W4Nhv31a8rJE1WS4MR9LRfbmZrAQw https://www.youtube.com/watch?v=oN10rf2P9gE https://www.youtube.com/watch?v=Ge4mWrmJBaw

5.	16.07.2021 to 07.08.2021	**Module -5** **Backtracking:** General method , N-Queens problem , Sum of subsets problem, Graph coloring, Hamiltonian cycles. **Programme andBound:** Assignment Problem, Travelling Sales Person problem, **0/1 Knapsack problem:** LC Programme and Bound solution, FIFO Programme and Bound solution. **NP-Complete and NP-Hard problems:** Basic concepts, non-deterministic algorithms, P, NP, NP-Complete, and NP-Hard classes . **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=DKCbsiDBN6c https://www.youtube.com/watch?v=xEv_Hl4B83A https://www.youtube.com/watch?v=Lm378j0CuYM&list=PL8xmmXn7pYtwcQRtWxhtGA7O6mGcNBshv https://www.youtube.com/watch?v=3RBNPc0_Q6g https://www.youtube.com/watch?v=1FEP_sNb62k https://www.youtube.com/watch?v=PfkBS9qIMRE https://www.youtube.com/watch?v=nLmhmB6NzcM

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

HOD
COMPUTER SCIENCE & ENGG.

Dr. Narendra Viswanath
Principal

20-21 - EVEN

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-AUG 2021) MICROSCHEDULE

SUBJECT	DESIGN AND ANALYSIS OF ALGORITHMS	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS42	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	20/04/21	TUE	**Module 1: Introduction:** What is an Algorithm?, Algorithm Specification	Covered	
2	22/04/21	THU	Analysis Framework , **Performance Analysis:** Space complexity, Time complexity	Covered	
3	23/04/21	FRI	**Asymptotic Notations:** Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and Little-oh notation (o)	Covered	
4	24/04/21	SAT	Mathematical analysis of recursive Algorithms with Examples	Covered	
5	27/04/21	TUE	Examples Contin.....	Covered	
6	29/04/21	THU	Mathematical analysis of Non-Recursive with Examples	Covered	
7	30/04/21	FRI	Examples Contin.....	Covered	
8	04/05/21	TUE	**Important Problem Types:** Sorting, Searching, String processing,	Covered	
9	06/05/21	THU	Graph Problems, Combinatorial Problems.	Covered	
10	07/05/21	FRI	**Fundamental Data Structures:** Stacks, Queues, Graphs	Covered	
11	08/05/21	SAT	**Fundamental Data Structures:** Trees	Covered	
12	11/05/21	TUE	**Fundamental Data Structures:** Sets and Dictionaries	Covered	

SUMMARY

PLANNED DATE	FROM: 20.04.2021	TO: 11.05.2021	
ACTUAL CLASSES TAKEN	FROM: 20 Apr 2021	TO: 18.5.2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 15	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C V Ramakrishnaswamy
HOD

Dr. Narendra Viswanath
Principal

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	13/05/21	THU	**Module 2:** **Divide and Conquer:** General method, Binarysearch	Covered	
14	15/05/21	SAT	Recurrence equation for divide and conquer	Covered	
15	18/05/21	TUE	Finding the maximum and minimum	Covered	
16	20/05/21	THU	Merge sort	Covered	
17	21/05/21	FRI	Merge sort Continu.....	Covered	
18	22/05/21	SAT	Quick sort	Covered	
19	25/05/21	TUE	Quick sort Continu.....	Covered	
20	27/05/21	THU	Strassen's matrix multiplication	Covered	
21	28/05/21	FRI	Strassen's matrix multiplication Contin.....	Covered	
22	29/05/21	SAT	Advantages and Disadvantages of divide and conquer	Covered	
23	01/06/21	TUE	**Decrease and Conquer Approach:** Topological Sort	Covered	
24	03/06/21	THU	Topological Sort Continu.....	Covered	

SUMMARY

PLANNED DATE	**FROM: 13.05.2021**	**TO: 03.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 20.05.2021	**TO:** 03.06.2021	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-08.

PRINCIPAL
Dr. Narendra Viswanath
Principal

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	04/06/21	FRI	**Module 3:** **Greedy Method:** General method	Covered	
25	05/06/21	SAT	Coin Change Problem	Covered	
26	08/06/21	TUE	Knapsack Problem	Covered	
27	10/06/21	THU	Job sequencing with deadlines	Covered	
28	11/06/21	FRI	**Minimum cost spanning trees:** Prim's Algorithm	Covered	
29	12/06/21	SAT	Prim's Algorithm Continu…and Kruskal's Algorithm	Covered	
30	15/06/21	TUE	Kruskal's Algorithm Continu…	Covered	
31	17/06/21	THU	**Single source shortest paths:** Dijkstra's Algorithm	Covered	
32	18/06/21	FRI	**Optimal Tree problem:** Huffman Trees and Codes	Covered	
33	19/06/21	SAT	Huffman Trees and Codes Continu…	Covered	
34	22/06/21	TUE	**Transform and Conquer Approach:** Heaps and Heap Sort	Covered	
35	24/06/21	THU	Heaps and Heap Sort Continu….	Covered	

SUMMARY

PLANNED DATE	FROM: 04.06.2021	TO:24.06.2021	
ACTUAL CLASSES TAKEN	FROM: 10.06.2021	TO: 24.06.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Sulhan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU

Dr. Narendra Viswanath
Principal

PRINCIPAL

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	25/06/21	FRI	**Module 4:** **Dynamic Programming:** General method with Examples,	Covered	
37	26/06/21	SAT	Multistage Graphs	Covered	
38	29/06/21	TUE	Multistage Graphs Continu...	Covered	
39	01/07/21	THU	**Transitive Closure:** Warshall's Algorithm	Covered	
40	02/07/21	FRI	Warshall's Algorithm Continu...	Covered	
41	03/07/21	SAT	**All Pairs Shortest Paths:** Floyd's Algorithm	Covered	
42	06/07/21	TUE	Floyd's Algorithm Continu.....	Covered	
43	08/07/21	THU	Optimal Binary Search Trees	Covered	
44	09/07/21	FRI	Knapsack problem	Covered	
45	10/07/21	SAT	Knapsack problem Continu...	Covered	
46	13/07/21	TUE	Travelling Sales Person problem	Covered	
47	15/07/21	THU	Reliability design	Covered	

SUMMARY

PLANNED DATE	**FROM: 25.06.2021**	**TO: 15.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 01 F 2021	**TO:** 20.07.2021	
NUMBER OF CLASSES	**ALLOCATED:** 18	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓ (50%)	**IA 3:** ✓ (80%)
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE
HOD

Dr. Narendra Viswanath
Principal

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
48	16/07/21	FRI	**Module 5:** **Backtracking:** General method	Covered	
49	17/07/21	SAT	N-Queens problem	Covered	
50	20/07/21	TUE	Sum of subsets problem	Covered	
51	22/07/21	THU	Graph coloring	Covered	
52	23/07/21	FRI	Hamiltonian cycles	Covered	
53	24/07/21	SAT	**Programme and Bound:** Assignment Problem	Covered	
54	27/07/21	TUE	Assignment Problem Contins...	Covered	
55	29/07/21	THU	Travelling Sales Person problem	Covered	
56	30/07/21	FRI	**0/1 Knapsack problem:** LC Programme and Bound solution , FIFO Programme and Bound solution	Covered	
57	31/07/21	SAT	**NP-Complete and NP-Hard problems:** Basic concepts,	Covered	
58	03/08/21	TUE	non-deterministic algorithms	Covered	
59	05/08/21	THU	P, NP, NP-Complete,	Covered	
60	07/08/21	SAT	NP-Hard classes	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.07.2021**	**TO: 07.08.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 16-7-21	**TO:** 07-08-21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Sudhan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE
HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-08

Dr. Narendra Viswanath
Principal

(20-21) - EVEN

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-AUG 2021) MICROSCHEDULE

EVEN 20-21

SUBJECT	WEB TECHNOLOGY AND ITS APPLICATIONS	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS63	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	20/4/21	TUE	**Module-1:** Introduction to HTML, What is HTML and Where did it come from?,	Covered	
2	21/4/21	WED	HTML Syntax, Semantic Markup, Structure of HTML Documents	Covered	
3	22/4/21	THU	Quick Tour of HTML Elements	Covered	
4	23/4/21	FRI	HTML5 Semantic Structure Elements	Covered	
5	27/4/21	TUE	Introduction to CSS,	Covered	
6	28/4/21	WED	What is CSS, CSS Syntax	Covered	
7	29/4/21	THU	Location of Styles,	Covered	
8	30/4/21	FRI	Selectors	Covered	
9	4/5/21	TUE	The Cascade: How Styles Interact	Covered	
10	5/5/21	WED	The Box Model	Covered	
11	6/5/21	THU	CSS Text Styling	Covered	
12	7/5/21	FRI	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	20.04.2021	TO: 07.05.2021	
ACTUAL CLASSES TAKEN	FROM: 20.4.2021	TO: 13.05.2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C.V. Sridhar Murthy
COORDINATOR, CSE
SIET, TUMKUR-05

Dr. Narendra Viswanath
Principal

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	11/5/21	TUE	**Module – 2:** HTML Tables	Covered	
14	12/5/21	WED	Forms, Introducing Tables	Covered	
15	13/5/21	THU	Styling Tables	Covered	
16	18/5/21	TUE	Introducing Forms, Form Control Elements, Table and Form Accessibility	Covered	
17	19/5/21	WED	Microformats	Covered	
18	20/5/21	THU	Advanced CSS: Layout, Normal Flow	Covered	
19	21/5/21	FRI	Positioning Elements, Floating Elements	Covered	
20	25/5/21	TUE	Constructing Multicolumn Layouts	Covered	
21	26/5/21	WED	Approaches to CSS Layout	Covered	
22	01/6/21	TUE	Responsive Design	Covered	
23	02/6/21	WED	CSS Frameworks	Covered	
24	03/6/21	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 11.05.2021	TO: 03.06.2021	
ACTUAL CLASSES TAKEN	FROM: 11-05-2021	TO: 4 & End	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suhan R
Staff Incharge

Prof. C.P Shanmukaswamy
HOD, CSE

COMPUTER SC. & ENGG.
SIET, TUMAKURU-06

PRINCIPAL
Dr. Narendra Viswanath
Principal

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	04/6/21	FRI	**Module – 3:** JavaScript: Client-Side Scripting	Covered	
25	08/6/21	TUE	What is JavaScript and What can it do?,	Covered	
26	09/6/21	WED	JavaScript Design Principles, Where does JavaScript Go?,	Covered	
27	10/6/21	THU	Syntax, JavaScript Objects	Covered	
28	11/6/21	FRI	The Document Object Model (DOM), JavaScript Events Forms	Covered	
29	15/6/21	TUE	Introduction to Server-Side Development with PHP	Covered	
30	16/6/21	WED	What is Server-Side Development	Covered	
31	17/6/21	THU	A Web Server's Responsibilities	Covered	
32	18/6/21	FRI	Quick Tour of PHP	Covered	
33	22/6/21	TUE	Program Control	Covered	
34	23/6/21	WED	Functions	Covered	
35	24/6/21	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 04.06.2021**	**TO:24.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 10.6.2021	**TO:** 23.6.2021	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Prof. C V Sharmukaswamy
HOD/CSE
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-06

Dr. Narendra Viswanath
Principal

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	25/6/21	FRI	**Module – 4:** PHP Arrays and Superglobals	covered	
37	01/7/21	THU	Arrays, $_GET and $_POST Superglobal Arrays	covered	
38	02/7/21	FRI	$_SERVER Array, $_Files Array	covered	
39	06/7/21	TUE	Reading/Writing Files, PHP Classes and Objects	covered	
40	07/7/21	WED	Object-Oriented Overview	covered	
41	08/7/21	THU	Classes and Objects in PHP	covered	
42	09/7/21	FRI	Object Oriented Design,	covered	
43	13/7/21	TUE	Error Handling and Validation	covered	
44	14/7/21	WED	What are Errors and Exceptions?,	covered	
45	15/7/21	THU	PHP Error Reporting	covered	
46	16/7/21	FRI	PHP Error and Exception Handling	covered	
47	20/7/21	TUE	Question paper discussion	covered	

SUMMARY

PLANNED DATE	**FROM: 25.06.2021**	**TO: 20.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 6.7.2021	**TO:** 20.7.2021	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓ (Est)
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE
HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-08

Dr. Narendra Viswanath
Principal

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
48	22/7/21	THU	**Module – 5** Managing State, The Problem of State in Web Applications	Covered	
49	23/7/21	FRI	Passing Information via Query String	Covered	
50	23/7/21	FRI	Passing Information via the URL Path, Cookies, Serialization	Covered	EXTRA
51	27/7/21	TUE	Session State, HTML5 Web Storage	Covered	
52	27/7/21	TUE	Caching, Advanced JavaScript and jQuery	Covered	EXTRA
53	28/7/21	WED	JavaScript Pseudo-Classes, jQuery Foundations	Covered	
54	28/7/21	WED	AJAX, Asynchronous File Transmission	Covered	EXTRA
55	03/8/21	TUE	Animation,	Covered	
56	03/8/21	TUE	Backbone MVC Frameworks	Covered	EXTRA
57	04/8/21	WED	XML Processing and Web Services	Covered	
58	04/8/21	WED	XML Processing, JSON,	Covered	EXTRA
59	05/8/21	THU	Overview of Web Services.	Covered	
60	06/8/21	FRI	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 22.07.21**	**TO: 06.08.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 22.07.21	**TO:** 06.08.21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2021) MACROSCHEDULE

SUBJECT	**WEB TECHNOLOGY AND ITS APPLICATIONS**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS63**	**SEM/SEC**	**VI**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

CO1: Define HTML and CSS syntax and semantics to build web pages.
CO2: Understand the concepts of Construct , visually format tables and forms using HTML using CSS
CO3: Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.
CO4: List the principles of object oriented development using PHP
CO5: Illustrate JavaScript frameworks like jQuery and Backbone which facilitates

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	20.04.2021 to 07.05.2021	**Module- 1:Introduction to HTML,** What is HTML and Where did it come from?, HTML Syntax, Semantic Markup, Structure of HTML Documents Quick Tour of HTML Elements HTML5 Semantic Structure Elements Introduction to CSS, What is CSS, CSS Syntax Location of Styles, Selectors The Cascade: How Styles Interact The Box Model CSS Text Styling Question paper discussion.	https://www.youtube.com/watch?v=01AFEzGSbME&list=PLDN4rrl48XKpZkf03iYFl-O29szTrs_O https://www.youtube.com/watch?v=GQNTBvSrKhE&list=PLrjkTqlSjamSwGQvNhgdmm2gkosSCXCnl https://www.youtube.com/watch?v=swE1ciO7gEE&list=PL-JvKqQn2Md-1Gs3WBBsmWOWSbEM7WsW

2.	11.05.2021 to 03.06.2021	**Module -2: HTML Tables** Forms, Introducing Tables Styling Tables Introducing Forms, Form Control Elements, Table and Form Accessibility Microformats Advanced CSS: Layout, Normal Flow Positioning Elements, Floating Elements Constructing Multicolumn Layouts Approaches to CSS Layout Responsive Design CSS Frameworks Question paper discussion.	https://www.youtube.com/watch?v=2Rr2rW9zv8g https://www.youtube.com/watch?v=YAE1FsYGotA https://www.youtube.com/watch?v=PfEmF07S4hw
3.	04.06.2021 to 24.06.2021	**Module -3 : JavaScript: Client-Side Scripting** What is JavaScript and What can it do?, JavaScript Design Principles, Where does JavaScript Go?, Syntax, JavaScript Objects The Document Object Model (DOM), JavaScript Events Forms Introduction to Server-Side Development with PHP What is Server-Side Development A Web Server's Responsibilities Quick Tour of PHP Program Control Functions Question paper discussion.	https://www.youtube.com/watch?v=ARvQsqJ_-NY https://www.youtube.com/watch?v=IMOpX3q9NJI https://www.youtube.com/watch?v=GQNT0v5zKhE&list=PLrjkTqHinm8wGQyNhgdmm2gkoa8CXCml

4.	25.06.2021 to 20.07.2021	**Module –4: PHP Arrays and Superglobals** Arrays, $_GET and $_POST Superglobal Arrays $_SERVER Array, $_Files Array Reading/Writing Files, PHP Classes and Objects Object-Oriented Overview Classes and Objects in PHP Object Oriented Design, Error Handling and Validation What are Errors and Exceptions?, PHP Error Reporting PHP Error and Exception Handling Question paper discussion.	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLJULFvhz0rE83N8khnq7acXYIeA0a1d3b https://www.youtube.com/watch?v=IVR2s9IoxI8&list=PLd05W4Nhv31aBrJE1WS4MR9LRfbmZrAQs https://www.youtube.com/watch?v=oNIlrf2P9gE https://www.youtube.com/watch?v=Gc4mWrmfBsw
5.	22.07.2021 to 06.08.2021	**Module –5: Managing State, The Problem of State in Web Applications** Passing Information via Query String Passing Information via the URL Path, Cookies, Serialization Session State, HTML5 Web Storage Caching, Advanced JavaScript and jQuery JavaScript Pseudo-Classes, jQuery Foundations AJAX, Asynchronous File Transmission Animation, Backbone MVC Frameworks XML Processing and Web Services XML Processing, JSON, Overview of Web Services. Question paper discussion.	https://www.youtube.com/watch?v=DKCbsiD8N6c https://www.youtube.com/watch?v=xFv_Hl4D83A https://www.youtube.com/watch?v=Lm378j0CuYM&list=PL8xmnXn7pVtwcQRtWxhvGA7OfmGcNIhsIv https://www.youtube.com/watch?v=3RBNFc0_Q6g https://www.youtube.com/watch?v=UEEP_sNb62k https://www.youtube.com/watch?v=PfkBS9qfMRE https://www.youtube.com/watch?v=sLmhmI86NzcM

Suhan R
Staff Incharge

Prof. C.Y. Shanthakumaraswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-06

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

[2021] Even Sem
Even 20-21

LESSON PLAN (APR- AUG 2021) MICRO SCHEDULE

SUBJECT	MICRO CONTROLLER AND EMBEDDED SYSTEMS	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS44	SEM/SEC	IV / A and B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	Microprocessors versus Microcontrollers	Covered	
2	21/04/21	WED	ARM Embedded Systems: The RISC design philosophy.	covered	
3	22/04/21	THU	The ARM Design Philosophy,	Covered	
4	23/04/21	FRI	Embedded System Hardware,	Covered	
6	26/04/21	MON	Embedded System Software.	Covered	Online
7	28/04/21	WED	ARM Processor Fundamentals: Registers,	Covered	
8	29/04/21	THU	Current Program Status Register,	Covered	
9	30/04/21	FRI	Pipeline, Exceptions,	Covered	
10	03/05/21	MON	Interrupts, and the Vector Table ,	Covered	
11	05/05/21	WED	Core Extensions	Covered	
12	06/05/21	THU	Continue..	Covered	
13	07/05/21	FRI	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 19/04/21	TO: 07/05/21	
ACTUAL CLASSES TAKEN	FROM: 19/04/21	TO: 07/05/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	10/05/21	MON	Introduction to the ARM Instruction Set : Data Processing Instructions ,	Covered	
14	12/05/21	WED	Programmed Instructions,	Covered	
15	13/05/21	FRI	Software Interrupt Instructions, Program Status Register Instructions,	Covered	
16	17/05/21	MON	Coprocessor Instructions,	Covered	
17	19/05/21	WED	Loading Constants ARM programming using Assembly language	Covered	Online
18	20/05/21	THU	Writing Assembly code,	Covered	
19	21/05/21	FRI	Profiling and cycle counting.	Covered	
20	24/05/21	MON	Continue…	Covered	
21	26/05/21	WED	Continue…	Covered	
22	27/05/21	THU	Continue…	Covered	

SUMMARY

PLANNED DATE	FROM: 10/05/21	TO: 25/05/21	
ACTUAL CLASSES TAKEN	FROM: 10/05/21	TO: 25/05/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Sharadadevamma
HOD, C&E

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	28/05/21	FRI	Embedded System Components: Embedded Vs General computing system,	Covered	
25	31/05/21	MON	History of embedded systems,	Covered	
26	2/06/21	WED	Classification of Embedded systems,	Covered	
27	3/06/21	THU	Major applications areas of embedded systems,	Covered	
28	4/06/21	FRI	purpose of embedded systems Core of an Embedded System including all types of processor/controller,	Covered	Online
29	7/06/21	MON	Memory, Sensors, Actuators, LED,	Covered	
30	9/06/21	WED	7 segment LED display, stepper motor, Keyboard,	Covered	
31	10/06/21	THU	Push button switch, Communication Interface (onboard and external types),	Covered	
32	11/06/21	FRI	Embedded firmware, Other system components.	Covered	
33	14/06/21	MON	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 28/05/21	TO: 14/06/21	
ACTUAL CLASSES TAKEN	FROM: 28/05/21	TO: 14/06/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shivakumaraswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	16/06/21	WED	Embedded System Design Concepts: Characteristics and Quality Attributes of Embedded Systems,	Covered	
37	17/06/21	THU	Operational quality attributes ,non-operational quality attributes,	Covered	
38	18/06/21	FRI	Continue…	Covered	
39	21/06/21	MON	Continue…	Covered	
40	23/06/21	WED	Continue…	Covered	Optional
41	24/06/21	THU	Continue…	Covered	
42	25/06/21	FRI	Continue…	Covered	
43	28/06/21	MON	Embedded Systems-Application and Domain specific,	Covered	
44	30/06/21	WED	Hardware Software Co-Design and Program Modelling,	Covered	
45	1/07/21	THU	embedded firmware design and development	Covered	
46	2/07/21	FRI	Continue…	Covered	
47	5/07/21	MON	Continue…	Covered	

SUMMARY

PLANNED DATE	FROM: 14/06/21	TO: 01/07/21	
ACTUAL CLASSES TAKEN	FROM: 14/06/21	TO: 01/07/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
48	07/07/21	WED	RTOS and IDE for Embedded System Design:	Covered	
49	8/07/21	THU	Operating System basics,	Covered	
50	9/07/21	FRI	Types of operating systems,	Covered	
51	12/07/21	MON	Task, process and threads (Only POSIX Threads with an example program),	Covered	
52	14/07/21	WED	Thread preemption, Multiprocessing and Multitasking,	Covered	
53	15/07/21	THU	Task Communication (without any program),	Covered	
54	16/07/21	FRI	Task synchronization issues – Racing and Deadlock,	Covered	Evaluvation
55	19/07/21	MON	Concept of Binary and counting semaphores (Mutex example without any program),	Covered	
56	21/07/21	WED	How to choose an RTOS,	Covered	
57	22/07/21	THU	Integration and testing of Embedded hardware and firmware,	Covered	
58	23/07/21	FRI	Embedded system Development Environment – Block diagram (excluding Keil),	Covered	
59	26/07/21	MON	Disassembler/decompiler, simulator,	Covered	
60	28/07/21	WED	emulator and debugging techniques,	Covered	
61	29/07/21	THU	target hardware debugging,	Covered	
62	30/07/21	FRI	boundary scan.	Covered	
63	2/08/21	MON	Continue…	Covered	
64	4/08/21	WED	Continue…	Covered	
65	5/08/21	THU	Continue…	Covered	
66	6/08/21	FRI	Continue…	Covered	

SUMMARY

PLANNED DATE	**FROM:** 07/07/21	**TO:** 06/08/21	
ACTUAL CLASSES TAKEN	**FROM:** 07/07/21	**TO:** 06/08/21	
NUMBER OF CLASSES	**ALLOCATED: 19**	**TAKEN:** 19	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓

MODULE	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K. V
Staff Incharge

Prof. C. V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572105

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2021) MICRO SCHEDULE

SUBJECT	SYSTEM SOFTWARE AND COMPILER DESIGN	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS61	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	Introduction to System Software,	Covered	
2	20/04/21	TUE	Machine Architecture of SIC and SIC/XE. Assemblers:	Covered	
3	21/04/21	WED	Continue..	Covered	
4	22/04/21	THU	Basic assembler functions,	Covered	
6	26/04/21	MON	machine dependent assembler features,	Covered	online
7	27/04/21	TUE	Continue..	Covered	
8	28/04/21	WED	machine independent assembler features,	Covered	
9	29/04/21	THU	Continue..	Covered	
10	03/05/21	MON	assembler design options	Covered	
11	04/05/21	TUE	Continue..	Covered	
12	05/05/21	WED	Basic Loader Functions	Covered	
13	06/05/21	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 19/04/21	TO: 06/05/21	
ACTUAL CLASSES TAKEN	FROM: 19/04/21	TO: 06/05/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C. Shivakumaraswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	10/05/21	MON	Introduction: Language Processors.	Covered	
14	11/05/21	TUE	The structure of a compiler.	Covered	
15	12/05/21	WED	The evaluation of programming languages.	Covered	
16	13/05/21	THU	The science of building compiler.	Covered	
17	17/05/21	MON	Applications of compiler technology.	Covered	online
18	18/05/21	TUE	Lexical Analysis: The role of lexical analyzer	Covered	
19	19/05/21	WED	Continue..	Covered	
20	20/05/21	THU	Input buffering, Specifications of token, recognition of tokens.	Covered	
21	24/05/21	MON	Continue..	Covered	
22	25/05/21	TUE	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 10/05/21	TO: 25/05/21	
ACTUAL CLASSES TAKEN	FROM: 10/05/21	TO: 25/05/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanthakaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENG. & TECHNOLOGY
Tumkur - 572 106.

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	26/05/21	WED	Syntax Analysis: Introduction	Covered	
25	27/05/21	THU	Continue..	Covered	
26	31/05/21	MON	Continue..	Covered	
27	01/06/21	TUE	Continue..	Covered	
28	02/06/21	WED	Context Free Grammars, Writing a grammar,	Covered	
29	03/06/21	THU	Continue..	Covered	
30	07/06/21	MON	Top Down Parsers	Covered	
31	08/06/21	TUE	Continue..	Covered	
32	09/06/21	WED	Bottom-Up Parsers	Covered	
33	10/06/21	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 26/05/21	TO: 10/06/21	
ACTUAL CLASSES TAKEN	FROM: 26/05/21	TO: 10/06/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	14/06/21	MON	Lex and Yacc – The Simplest Lex Program,	Covered	
37	15/06/21	TUE	Grammars, Parser-Lexer Communication, A YACC Parser,	Covered	
38	16/06/21	WED	The Rules Section, Running LEX and YACC,	Covered	
39	17/06/21	THU	LEX and Hand-Written Lexers,	Covered	
40	21/06/21	MON	Using LEX - Regular Expression,	Covered	
41	22/06/21	TUE	Examples of Regular Expressions,	Covered	
42	23/06/21	WED	A Word Counting Program	Covered	
43	24/06/21	THU	Using YACC – Grammars	Covered	
44	28/06/21	MON	Recursive Rules, Shift/Reduce Parsing,	Covered	
45	29/06/21	TUE	What YACC Cannot Parse	Covered	
46	30/06/21	WED	A YACC Parser - The Definition Section, The Rules Section, The LEXER	Covered	
47	01/07/21	THU	Compiling and Running a Simple Parser, Arithmetic Expressions and Ambiguity.	Covered	

SUMMARY

PLANNED DATE	FROM: 14/06/21	TO: 01/07/21	
ACTUAL CLASSES TAKEN	FROM: 14/06/21	TO: 01/07/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	05/07/21	MON	Syntax Directed Translation,	Covered	
49	06/07/21	TUE	Continue..	Covered	
50	07/07/21	WED	Continue..	Covered	
51	08/07/21	THU	Continue..	Covered	
52	12/07/21	MON	Continue..	Covered	
53	13/07/21	TUE	Intermediate code generation	Covered	
54	14/07/21	WED	Continue..	Covered	
55	15/07/21	THU	Continue..	Covered	
56	19/07/21	MON	Continue..	Covered	
57	20/07/21	TUE	Code generation	Covered	CAT-II
58	21/07/21	WED	Continue..	Covered	
59	22/07/21	THU	Continue..	Covered	
60	26/07/21	MON	Continue..	Covered	
61	27/07/21	TUE	Continue..	Covered	
62	28/07/21	WED	Revision	Covered	
63	29/07/21	THU	Revision	Covered	
64	02/08/21	MON	Revision	Covered	
65	03/08/21	TUE	Revision	Covered	
66	04/08/21	WED	Revision	Covered	
67	05/08/21	THU	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 05/07/21	TO: 05/08/21	
ACTUAL CLASSES TAKEN	FROM: 05/07/21	TO: 05/08/21	
NUMBER OF CLASSES	ALLOCATED: 20	TAKEN: 20	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shivakumaraswamy
HOD, CSE

PRINCIPAL
Dr. Narendra Viswanath
Principal

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-AUG 2021) MICROSCHEDULE

Even 20-21 | 2020 Even Sem

SUBJECT	System Software and Compilers	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS61	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	Introduction to System Software,	Covered	
2	20/04/21	TUE	Machine Architecture of SIC and SIC/XE Assemblers	Covered	
3	21/04/21	WED	Continue..	Covered	
4	22/04/21	THU	Basic assembler functions,	Covered	
6	26/04/21	MON	machine dependent assembler features,	Covered	
7	27/04/21	TUE	Continue..	Covered	
8	28/04/21	WED	machine independentassembler features.	Covered	
9	29/04/21	THU	Continue..	Covered	
10	03/05/21	MON	assembler design options	Covered	
11	04/05/21	TUE	Continue..	Covered	
12	05/05/21	WED	Basic Loader Functions	Covered	
13	06/05/21	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 19/04/21	TO: 06/05/21	
ACTUAL CLASSES TAKEN	FROM: 19/4/21	TO: 06/05/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	10/05/21	MON	Introduction: Language Processors.	Covered	
14	11/05/21	TUE	The structure of a compiler,	Covered	
15	12/05/21	WED	The evaluation ofprogramming languages.	Covered	
16	13/05/21	THU	The science of building compiler,	Covered	
17	17/05/21	MON	Applications of compiler technology.	Covered	
18	18/05/21	TUE	Lexical Analysis: The role of lexical analyzer	Covered	
19	19/05/21	WED	Continue..	Covered	
20	20/05/21	THU	Input buffering, Specifications of token, recognition of tokens.	Covered	
21	24/05/21	MON	Continue..	Covered	
22	25/05/21	TUE	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 10/05/21	TO: 25/05/21	
ACTUAL CLASSES TAKEN	FROM: 10/05/21	TO: 25/05/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chetan K V
Staff Incharge

Prof. C.M. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	26/05/21	WED	Syntax Analysis: Introduction	Covered	
25	27/05/21	THU	Continue..	Covered	
26	31/05/21	MON	Continue..	Covered	
27	01/06/21	TUE	Continue..	Covered	
28	02/06/21	WED	Context Free Grammars, Writing a grammar.	Covered	
29	03/06/21	THU	Continue..	Covered	
30	07/06/21	MON	Top Down Parsers	Covered	
31	08/06/21	TUE	Continue..	Covered	
32	09/06/21	WED	Bottom-Up Parsers	covered	
33	10/06/21	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 26/05/21	TO:10/06/21	
ACTUAL CLASSES TAKEN	FROM: 26/05/21	TO: 10/06/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chaya K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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TUMKUR - 572106.

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	14/06/21	MON	Lex and Yacc –The Simplest Lex Program,	Covered	
37	15/06/21	TUE	Grammars, Parser-Lexer Communication, A YACC Parser,	Covered	
38	16/06/21	WED	The Rules Section, Running LEX and YACC,	Covered	
39	17/06/21	THU	LEX and Hand- Written Lexers,	Covered	
40	21/06/21	MON	Using LEX - Regular Expression,	Covered	
41	22/06/21	TUE	Examples of Regular Expressions,	Covered	
42	23/06/21	WED	A Word Counting Program	Covered	
43	24/06/21	THU	Using YACC – Grammars	Covered	
44	28/06/21	MON	Recursive Rules, Shift/Reduce Parsing,	Covered	
45	29/06/21	TUE	What YACC CannotParse	Covered	
46	30/06/21	WED	A YACC Parser - The Definition Section, The Rules Section, The LEXER	Covered	
47	01/07/21	THU	Compilingand Running a Simple Parser, Arithmetic Expressions and Ambiguity.	Covered	

SUMMARY

PLANNED DATE	FROM: 14/06/21	TO: 01/07/21	
ACTUAL CLASSES TAKEN	FROM: 14/06/21	TO: 01/07/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. [illegible]
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
48	05/07/21	MON	Syntax Directed Translation.	Covered	
49	06/07/21	TUE	Continue..	Covered	
50	07/07/21	WED	Continue..	Covered	
51	08/07/21	THU	Continue..	Covered	
52	12/07/21	MON	Continue..	Covered	
53	13/07/21	TUE	Intermediate code generation	Covered	
54	14/07/21	WED	Continue..	Covered	
55	15/07/21	THU	Continue..	Covered	
56	19/07/21	MON	Continue..	Covered	
57	20/07/21	TUE	Code generation	Covered	
58	21/07/21	WED	Continue..	Covered	
59	22/07/21	THU	Continue..	Covered	
60	26/07/21	MON	Continue..	Covered	
61	27/07/21	TUE	Continue..	Covered	
62	28/07/21	WED	Revision	Covered	
63	29/07/21	THU	Revision	Covered	
64	02/08/21	MON	Revision	Covered	
65	03/08/21	TUE	Revision	Covered	
66	04/08/21	WED	Revision	Covered	
67	05/08/21	THU	Revision	Covered	

SUMMARY

PLANNED DATE	**FROM:** 05/07/21	**TO:** 05/08/21	
ACTUAL CLASSES TAKEN	**FROM:** 05/07/21	**TO:** 05/08/21	
NUMBER OF CLASSES	**ALLOCATED: 20**	**TAKEN:** 20	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Staff Incharge

Prof. C.V. Shanmukaswamy
HOD, ESE

Dr. Narendra
Principal

PRINCIPAL
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TUMKUR - 572103.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-AUG 2021) MICRO SCHEDULE [Even 20-21]

SUBJECT	DESIGN AND ANALYSES OF ALGORITHMS	STAFF NAME	Mr. KIRAN G M
SUBJECT CODE	18CS42	SEM/SEC	IV 'B'
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	20/04/21	TUE	**Module 1: Introduction:** What is an Algorithm?, Algorithm Specification	✓	
2	22/04/21	THU	Analysis Framework , **Performance Analysis:** Space complexity, Time complexity	✓	
3	23/04/21	FRI	**Asymptotic Notations:** Big-Oh notation (O), Omega notation (Ω), Theta notation ( ), and Little-oh notation (o)	✓	
4	24/04/21	SAT	Mathematical analysis of recursive Algorithms with Examples	✓	
5	27/04/21	TUE	Examples Contin.....	✓	
6	29/04/21	THU	Mathematical analysis of Non-Recursive with Examples	✓	
7	30/04/21	FRI	Examples Contin.....	✓	
8	04/05/21	TUE	**Important Problem Types:** Sorting, Searching, String processing,	✓	
9	06/05/21	THU	Graph Problems, Combinatorial Problems.	✓	
10	07/05/21	FRI	**Fundamental Data Structures:** Stacks, Queues, Graphs	✓	
11	08/05/21	SAT	**Fundamental Data Structures:** Trees	✓	
12	11/05/21	TUE	**Fundamental Data Structures:** Sets and Dictionaries	✓	

SUMMARY

PLANNED DATE	FROM: 20.04.2021	TO: 11.05.2021	
ACTUAL CLASSES TAKEN	FROM: 20/4/21	TO: 11/5/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C.V. Shanmukaswamy
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HOD,
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SIET, TUMAKURU-08.

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	13/05/21	THU	**Module 2:** **Divide and Conquer:** General method, Binarysearch	✓	
14	15/05/21	SAT	Recurrence equation for divide and conquer	✓	
15	18/05/21	TUE	Finding the maximum and minimum	✓	
16	20/05/21	THU	Merge sort	✓	
17	21/05/21	FRI	Merge sort Contins.....	✓	
18	22/05/21	SAT	Quick sort	✓	
19	25/05/21	TUE	Quick sort Contins.....	✓	
20	27/05/21	THU	Strassen's matrix multiplication	✓	
21	28/05/21	FRI	Strassen's matrix multiplication Contin.....	✓	
22	29/05/21	SAT	Advantages and Disadvantages of divide and conquer	✓	
23	01/06/21	TUE	**Decrease and Conquer Approach:** Topological Sort	✓	
24	03/06/21	THU	Topological Sort Contins.....	✓	

SUMMARY

PLANNED DATE	FROM: 13.05.2021	TO: 03.06.2021	
ACTUAL CLASSES TAKEN	FROM: 13/5/21	TO: 4/6/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V Sharmukaswamy
HOD, CSE
HOD
COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-08.

Dr. Narendra Viswanath
Principal
SIET, TUMAKURU

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	04/06/21	FRI	**Module 3:** **Greedy Method:** General method	✓	
25	05/06/21	SAT	Coin Change Problem	✓	
26	08/06/21	TUE	Knapsack Problem	✓	
27	10/06/21	THU	Job sequencing with deadlines	✓	
28	11/06/21	FRI	**Minimum cost spanning trees:** Prim's Algorithm	✓	
29	12/06/21	SAT	Prim's Algorithm Continu…and Kruskal's Algorithm	✓	
30	15/06/21	TUE	Kruskal's Algorithm Continu…	✓	
31	17/06/21	THU	**Single source shortest paths:** Dijkstra's Algorithm	✓	
32	18/06/21	FRI	**Optimal Tree problem:** Huffman Trees and Codes	✓	
33	19/06/21	SAT	Huffman Trees and Codes Continu…	✓	
34	22/06/21	TUE	**Transform and Conquer Approach:** Heaps and Heap Sort	✓	
35	24/06/21	THU	Heaps and Heap Sort Continu…	✓	

SUMMARY

PLANNED DATE	FROM: 04.06.2021	TO:24.06.2021	
ACTUAL CLASSES TAKEN	FROM: 5/6/21	TO: 24/6/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C.V Shanmukaswamy
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SIET, TUMAKURU.

Dr. Narendra Viswanath
Principal
PRINCIPAL
SIET, TUMAKURU
PRINCIPAL
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TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	25/06/21	FRI	**Module 4:** **Dynamic Programming:** General method with Examples.	✓	
37	26/06/21	SAT	Multistage Graphs	✓	
38	29/06/21	TUE	Multistage Graphs Contnu…	✓	
39	01/07/21	THU	**Transitive Closure:** Warshall's Algorithm	✓	
40	02/07/21	FRI	Warshall's Algorithm Contnu…	✓	
41	03/07/21	SAT	**All Pairs Shortest Paths:** Floyd's Algorithm	✓	
42	06/07/21	TUE	Floyd's Algorithm Contnu…	✓	
43	08/07/21	THU	Optimal Binary Search Trees	✓	
44	09/07/21	FRI	Knapsack problem	✓	
45	10/07/21	SAT	Knapsack problem Contnu…	✓	
46	13/07/21	TUE	Travelling Sales Person problem	✓	
47	15/07/21	THU	Reliability design	✓	

SUMMARY

PLANNED DATE	FROM: 25.06.2021	TO: 15.07.2021	
ACTUAL CLASSES TAKEN	FROM: 25/6/21	TO: 13/7/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE
HOD
COMPUTER SCIENCE & Engg.
SIT, TUMAKURU-05

Dr. Narendra Viswanath
Principal

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	16/07/21	FRI	**Module 5:** **Backtracking:** General method	Covered	
49	17/07/21	SAT	N-Queens problem	Covered	
50	20/07/21	TUE	Sum of subsets problem	Covered	
51	22/07/21	THU	Graph coloring	Covered	
52	23/07/21	FRI	Hamiltonian cycles	Covered	
53	24/07/21	SAT	**Programme and Bound:** Assignment Problem	Covered	
54	27/07/21	TUE	Assignment Problem Continu...	Covered	
55	29/07/21	THU	Travelling Sales Person problem	Covered	
56	30/07/21	FRI	**0/1 Knapsack problem:** LC Programme and Bound solution , FIFO Programme and Bound solution	Covered	
57	31/07/21	SAT	**NP-Complete and NP-Hard problems:** Basic concepts,	Covered	
58	03/08/21	TUE	non-deterministic algorithms	Covered	
59	05/08/21	THU	P, NP, NP-Complete,	Covered	
60	07/07/21	SAT	NP-Hard classes	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.07.2021**	**TO: 07.08.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 16/7/21	**TO:** 7/8/21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Prof. C C Shanmukaswamy
HOD, CSE

Dr. Rajendra Viswanath
PRINCIPAL

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -AUG 2021) MACROSCHEDULE

CSE
EVEN SEM
20-21

COURSE	OBJECT ORIENTED CONCEPTS	STAFF NAME	PROF. C.V.SHANMUKA SWAMY
COURSE CODE	18CS45	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- ✓ Explain the object-oriented concepts and JAVA.
- ✓ Develop computer programs to solve real world problems in Java.
- ✓ Develop simple GUI interfaces for a computer program to interact with users, and to understand
- ✓ the event-based GUI handling principles using swings.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 05.05.2021	**Module 1:Introduction to Object Oriented Concepts:** A Review of structures, Procedure-Oriented Programming system, Object OrientedProgramming System, Comparison of Object Oriented Language with C, Console I/O,variables and reference variables, Function Prototyping, Function Overloading. **Class andObjects:** Introduction, member functions and data, objects and functions. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=wKkufKRmf8Y https://www.cprogramming.com/tutorial/references.html https://www.youtube.com/watch?v=dh0mKAPFiiQ https://www.youtube.com/watch?v=vEmJrdnrXDA https://www.tutorialspoint.com/cplusplus/cpp_class_member_functions.htm
2	08.05.2021 to 25.05.2021	**Module -2: Class and Objects (contd):** Objects and arrays, Namespaces, Nested classes, Constructors, Destructors. **Introduction to Java**: Java's magic: the Byte code; Java Development Kit (JDK); the JavaBuzzwords, Object-oriented programming: Simple Java programs. Data types, variables andarrays, Operators, Control Statements. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=PVzuuUTMm4 https://www.w3schools.com/java/java_intro.asp https://www.youtube.com/watch?v=GNcxrAbs7Zg https://www.youtube.com/watch?v=nBC0IT2-4ogM https://www.youtube.com/watch?v=orUTqJCnbRE&list=PL89LTxxnGM1SMSQBPQLN4aM

			eMOOrVidOs
3	26.05.2021 to 15.06.2021	**Module -3:Classes, Inheritance,Exception Handling:** Classes: Classes fundamentals; Declaringobjects; Constructors, this keyword, garbage collection. **Inheritance:** inheritance basics,using super, creating multi level hierarchy, method overriding. **Exception handling:**Exception handling in Java **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Y-PQvRUiSSY https://www.geeksforgeeks.org/inheritance-in-java/ https://beginnersbook.com/2014/01/method-overriding-in-java-with-example/
4	16.06.2021 to 12.07.2021	**Module -4: Packages and Interfaces:**Packages, Access Protection, Importing Packages. Interfaces. **Multi Threaded Programming:**MultiThreaded Programming: What are threads? How to make the classes threadable ; Extending threads; Implementing runnable; Synchronization; Changing state of the thread; Bounded buffer problems, producer consumer problems. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=miIEPYPCv8 https://www.youtube.com/watch?v=L8S6BvX8ad https://www.youtube.com/watch?v=xNbvt3SGMM https://www.java67.com/2012/12/producer-consumer-problem-with-wait-and-notify-example.html
5	13.07.2021 to 07.08.2021	**Module -5** **Event Handling:** Two event handling mechanisms; The delegation event model; Eventclasses; Sources of events; Event listener interfaces; Using the delegation event model; Adapter classes; Inner classes. **Swings:** Swings: The origins of Swing; Two key Swing features; Components andContainers; The Swing Packages; A simple Swing Application; Create a Swing Applet; JLabel and ImageIcon; JTextField;The Swing Buttons; JTabbedpane; JScrollPane; JList;JComboBox; JTable. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=05mXTL4ZB9M https://www.youtube.com/watch?v=KcPIC08ePVo&list=PLdmiIEvaTs3apn5rmxsHHBZmPPZNK5td http://ec.colombotelam.edu/swathi/eight/java/Swing.html https://www.youtube.com/watch?v=B0USRU9OTOo

Textbooks:
1. Sourav Sahay, Object Oriented Programming with C++ , 2nd Ed, Oxford University Press,2006
2. Herbert Schildt, Java The Complete Reference, 7th Edition, Tata McGraw Hill, 2007.

Reference Books:

1. Mahesh Bhave and Sunil Patekar, "Programming with Java", First Edition, Pearson Education,2008, ISBN:9788131720806
2. Herbert Schildt, The Complete Reference C++, 4th Edition, Tata McGraw Hill, 2003.
3. Stanley B.Lippmann, Josee Lajoie, C++ Primer, 4th Edition, Pearson Education, 2005.
4. Rajkumar Buyya,S Thamarai selvi, xingchen chu, Object oriented Programming with java, Tata McGraw Hill education private limited.
5. Richard A Johnson, Introduction to Java Programming and OOAD, CENGAGE Learning.
6. E Balagurusamy, Programming with Java A primer, Tata McGraw Hill companies.

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COMPUTER SCIENCE & ENGG.
SIET, TUMAKURU-05.

PRINCIPAL
SIDDAGANGA INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -AUG 2021) MICROSCHEDULE

COURSE	OBJECT ORIENTED CONCEPTS	STAFF NAME	PROF. C.V.SHANMUKA SWAMY
COURSE CODE	18CS45	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	**Introduction to Object Oriented Concepts**	Covered	
2	20/04/21	TUE	A Review of structures, Procedure-Oriented Programming system	Covered	
3	21/04/21	WED	Object OrientedProgramming System	Covered	
4	24/04/21	SAT	Comparison of Object Oriented Language with C	Covered	
5	26/04/21	MON	Console I/O,variables and reference variables	Covered	
6	27/04/21	TUE	Function Prototyping, Function Overloading.	Covered	
7	28/04/21	WED	**Class andObjects:** Introduction	Covered	
8	03/05/21	MON	member functions and data	Covered	
9	04/05/21	TUE	,member functions and datacont…	Covered	
10	05/05/21	WED	objects and functions.	Covered	

SUMMARY

PLANNED DATE	FROM: 19.04.2021	TO: 05.05.2021	
ACTUAL CLASSES TAKEN	FROM: 19/4/21	TO: 5/5/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: Yes.	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: Yes.	QP DISCUSSION: Yes
	QUIZ: Yes.	SEMINARS: —	ANY OTHER: —

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TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	08/05/21	SAT	**Class and Objects (contd)**	covered	
12	10/05/21	MON	Objects and arrays, Namespaces	Covered	
13	11/05/21	TUE	Nested classes, Constructors, Destructors	covered	
14	12/05/21	WED	**Introduction to Java**: Java's magic: the Byte code	Covered	
15	15/05/21	SAT	Java Development Kit (JDK)	Covered	
16	17/05/21	MON	the JavaBuzzwords	covered	
17	18/05/21	TUE	Object-oriented programming	Covered	
18	19/05/21	WED	Simple Java programs	Covered	
19	22/05/21	SAT	Data types, variables andarrays	covered	
20	24/05/21	MON	Operators, Control Statements.	covered	
21	25/05/21	TUE	Doubts Clearing Session	covered	

SUMMARY

PLANNED DATE	**FROM: 08.05.2021**	**TO: 25.05.2021**	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 11**	
CONTENT COVERED FOR IA	**IA 1:** Yes	**IA 2:** Yes (½)	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS: 01**	**TUTORIALS:**	**QP DISCUSSION: 01**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE III					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
22	26/05/21	WED	**Classes, Inheritance,Exception Handling**	Covered	
23	29/05/21	SAT	Classes: Classes fundamentals	covered	
24	31/05/21	MON	Declaring objects, Constructors	Covered	
25	01/06/21	TUE	this keyword	covered	
26	02/06/21	WED	garbage collection.	Covered	
27	05/06/21	SAT	**Inheritance:** inheritance basics	covered	
28	07/06/21	MON	using super	covered	
29	08/06/21	TUE	creatingmulti level hierarchy, method overriding.	Covered	
30	09/06/21	WED	**Exception handling:**Exception handling in Java	Covered	
31	12/06/21	SAT	Exception handling in Java	Covered	
32	14/06/21	MON	Revision	Covered	
33	15/06/21	TUE	Doubts Clearing Session	covered	

SUMMARY

PLANNED DATE	**FROM: 26.05.2021**	**TO:15.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 26/5/21	**TO:** 15/6/21	
NUMBER OF CLASSES	**ALLOCATED:** 10	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** Yes	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
34	16/06/21	WED	**Packages and Interfaces**	Covered	
35	19/06/21	SAT	Packages, Access Protection	Covered	
36	21/06/21	MON	Importing Packages, Interfaces.	Covered	
37	22/06/21	TUE	Importing Packages, Interfacescontn,..	Covered	
38	23/06/21	WED	**Multi Threaded Programming:**Multi Threaded Programming	Covered	
39	26/06/21	SAT	What are threads? How to make the classes threadable	Covered	
40	03/07/21	MON	Extending threads, Implementing runnable	Covered	
41	05/07/21	MON	Synchronization, Changing state of the thread	covered	
42	06/07/21	TUE	Bounded buffer problems	Covered	
43	07/07/21	WED	producer consumer problems.	Covered	
44	10/07/21	SAT	Revision	Covered	
45	12/07/21	MON	Previous Question Paper Solution Discussion	Covered.	

SUMMARY

PLANNED DATE	**FROM:16.06.2021**	**TO: 12.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 16/6/21	**TO:** 12/7/21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** Yes (12)	**IA 3:** Yes (12)
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
46	13/07/21	TUE	**Event Handling:** Two event handling mechanisms	Covered	
47	14/07/21	WED	The delegation event model,Eventclasses	Covered	
48	17/07/21	SAT	Sources of events, Event listener interfaces	Covered	
49	19/07/21	MON	Using the delegation event model	Covered	
50	20/07/21	TUE	Adapter classes, Inner classes.	Covered	
51	24/07/21	SAT	**Swings:** Swings: The origins of Swing, Two key Swing features	Covered	
52	26/07/21	MON	Components and Containers, The Swing Packages	Covered	
53	27/07/21	TUE	A simple Swing Application, Create a Swing Applet, Jlabel and Imageicon	Covered	
54	28/07/21	WED	JTextField, The Swing Buttons, JTabbedpane	Covered	
55	02/08/21	MON	JScrollPane, JList, JComboBox, JTable.	Covered	
56	03/08/21	TUE	Revision	Covered	
57	04/08/21	WED	Previous Question Paper Solution Discussion	Covered	
58	07/08/21	SAT	Doubts Clearing Session	covered	

SUMMARY

PLANNED DATE	**FROM: 13.07.2021**	**TO: 07.08.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 13/7/21	**TO:** 7/8/21	
NUMBER OF CLASSES	**ALLOCATED: 13**	**TAKEN:** 13.	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** —	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** —	**QP DISCUSSION:** ✓
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR - JULY2021) MACROSCHEDULE

EVEN 20-21

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	17CS82	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	40 (Question paper will be set and evaluated for 40 marks and later reduced to 30)

Course Outcomes or Cos

- Master the concepts of HDFS and MapReduce framework
- Investigate Hadoop related tools for Big Data Analytics and perform basicHadoop Administration
- Recognize the role of Business Intelligence, Data warehousing and Visualization indecision making
- Infer the importance of core data mining techniques for data analytics
- Compare and contrast different Text Mining Techniques

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 3.05.2021	**Module-1:**Hadoop Distributed File System Basics, Running Example Programs and Benchmarks, HadoopMapReduce Framework, MapReduce Programming **No. of Contact Sessions: 13**	https://www.youtube.com/results?search_query=Hadoop+Distributed+File+System+Basics%2C+Running+Example+Programs+and+10+Hours+Benchmarks%2C+Hadoop+MapReduce+Framework%2C+MapReduce+Programming
2	04.05.2021 to 24.05.2021	**Module-2**Essential Hadoop Tools, Hadoop YARN Applications, Managing Hadoop with Apache Amburi, Basic Hadoop Administration Procedures **No. of Contact Sessions: 13**	https://www.youtube.com/results?search_query=Essential+Hadoop+Tools%2C+Hadoop+YARN+Application%2C+Managing+Hadoop+with+Apache+Amburi%2C+Basic+Hadoop+Administration+Procedures
3	25.05.2021 to	**Module -3:**Business Intelligence Concepts and Application, Data Warehousing, Data Mining, Data Visualization **No. of Contact Sessions: 13**	https://www.youtube.com/results?search_query=Business+Intelligence+

	10.06.2021		Concepts+and+Applicati on%2C+Data+Warehou sing%2C+Data++Minin g%2C+Data+Visualizati on
4	11.06.2021 to 30.06.2021	**Module -4**Decision Trees, Regression, Artificial Neural Networks, Cluster Analysis, Association Rule Mining **No. of Contact Sessions: 13**	https://www.youtube.co m/results?search_query= Decision+Trees%2C+Re gression%2C+Artificial +Neural+Networks%2C +Cluster+Analysis%2C ++Association+Rule+M ining
5	01.07.2021 to 20.07.2021	**Module -5**Text Mining, Naïve-Bayes Analysis, Support Vector Machines, Web Mining, Social Network Analysis. **No. of Contact Sessions: 15**	https://www.youtube.co m/results?search_query= Text+Mining%2C+Na%C3%AFve-Bayes+Analysis%2C+Support+Vector+Machines%2C+Web+Mining%2C++Social+Network+Analysis.

TEXT BOOKS:

Text Books:

1. Douglas Eadline, **"Hadoop 2 Quick-Start Guide: Learn the Essentials of Big Data Computing in the Apache Hadoop 2 Ecosystem"**, 1st Edition, Pearson Education, 2016, ISBN-13: 978-9332570351
2. Anil Maheshwari, **"Data Analytics"**, 1st Edition, McGraw Hill Education, 2017, ISBN-13: 978-9352604180

REFERENCE BOOKS:

1) Tom White, **"Hadoop: The Definitive Guide"**, 4 Edition, O'Reilly Media.
2) Boris Lublinsky, Kevin T.Smith, Alexey Yakubovich, **"Professional Hadoop Solutions"**, 1 stEdition, Wrox Press, 2014ISBN-13: 978-8126551071
3) Eric Sammer, **"Hadoop Operations: A Guide for Developers and Administrators"**, 1st Edition, O'Reilly Media, 2012.ISBN-13: 978-9350239261

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53	30/06/21	THU	Association Rule Mining	Covered	

SUMMARY

PLANNED DATE	**FROM:11.06.2021**	**TO: 30.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 11/6/21	**TO:** 23/6/21	
NUMBER OF CLASSES	**ALLOCATED: 13**	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ: ✓	**SEMINARS:** ✓	**ANY OTHER:**

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
54	01/07/21	THU	**Module-5:** Text Mining	Covered	
55	02/07/21	FRI	Text Mining	Covered	
56	05/07/21	MON	Text Mining	Covered	
57	06/07/21	TUE	Naïve-Bayes Analysis	Covered	
58	07/07/21	WED	Naïve-Bayes Analysis	Covered	
59	08/07/21	THU	Naïve-Bayes Analysis	Covered	
60	09/07/21	FRI	Support Vector Machines	Covered	
61	12/07/21	MON	Support Vector Machines	Covered	
62	13/07/21	TUE	Web Mining	Covered	
63	14/07/21	WED	Web Mining	Covered	

64	15/07/21	THU	Social Network Aqalysis	Covered	
65	16/07/21	FRI	Social Network Analysis	Covered	
66	19/07/21	MON	Question paper discussion	Covered	
67	20/07/21	TUE	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 01.07.2021**	**TO: 20.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 1/7/21	**TO:** 20/7/21	
NUMBER OF CLASSES	**ALLOCATED: 14**	**TAKEN:** 14	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ: ✓	**SEMINARS:** ✓	**ANY OTHER:**

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR - JULY 2021) MICRO SCHEDULE

SUBJECT	G DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	17	SEM/SEC	VIII
IA Marks (CIE)	40 erage of three tests for 30 and 10 marks for nent)	Maximum Exam Marks (SEE)	40 (Question paper will be set and evaluated for 40 marks and later reduced to 30)

MODULE 1				
SL No.	DATE	LESSON PLANNED	LESSON COVERED	REMARKS
1	19-04-21	Mod 1: Hadoop Distributed File System Basics	Covered	
2	20-04-21	Hadoop Distributed File System Basics.	Covered	
3	21-04-21	Hadoop Distributed File System Basics.	Covered	
4	23-04-21	Hadoop Distributed File System Basics.	Covered	
5	23-04-21	Hadoop Distributed File System Basics.	Covered	
6	26-04-21	Running Example Programs and Benchmarks.	Covered	
7	27-04-21	Running Example Programs and Benchmarks.	Covered	
8	28-04-21	Running Example Programs and Benchmarks	Covered	
9	29-04-21	Hadoop MapReduce Framework	Covered	
10	30-04-21	Hadoop MapReduce Framework	Covered	
11	01-05-21	Hadoop MapReduce Framework	Covered	
12	03-05-21	Map Reduce Programming	Covered	
13	03-05-21	Map Reduce Programming	Covered	

SUMMARY

PLANNED	FROM: 19.04.2021	TO: 03.05.2021

ACTUAL CLASSES TAKEN	FROM: 19/4/21	TO: 3/5/21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
14	04-05-21	MON	**Module-2** Essential Hadoop Tools	Covered	
15	05-05-21	TUE	Essential Hadoop Tools	Covered	
16	06-05-21	WED	Essential Hadoop Tools	Covered	
17	10-05-21	THU	Essential Hadoop Tools	Covered	
18	11-05-21	FRI	Hadoop YARN Applications	Covered	
19	12-05-21	MON	Hadoop YARN Applications	Covered	
20	13-05-21	TUE	Hadoop YARN Applications	Covered	
21	17-05-21	WED	Hadoop YARN Applications	covered	
22	18-05-21	THU	Managing Hadoop with Apache Ambari	Covered	
23	19-05-21	FRI	Managing Hadoop with Apache Ambari	covered	
24	20-05-21	MON	Managing Hadoop with Apache Ambari	Covered	
25	21-05-21	TUE	Basic Hadoop Administration Procedures	Covered	
26	24-05-21	WED	Basic Hadoop Administration Procedures	covered.	

SUMMARY

PLANNED DATE	FROM: 04.05.2021	TO: 24.05.2021	
ACTUAL CLASSES TAKEN	FROM: 4/5/21	TO: 24/5/21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:

VALUE ADDITION BEYOND SYLLABUS	TO	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
		QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III				
SL No.	DATE	LESSON PLANNED	LESSON COVERED	REMARKS
27	25-5-21	Module-3: Business Intelligence Concepts and Application	covered	
28	26-5-21	Business Intelligence Concepts and Appl	covered	
29	27-5-21	Business Intelligence Concepts and Appl	covered	
30	28-5-21	Business Intelligence Concepts and Appl	covered	
31	31-5-21	Business Intelligence Concepts and Appl	covered	
32	1-6-21	Data Preprocessing	covered	
33	2-6-21	Data Preprocessing	covered	
34	3-6-21	Data Preprocessing	covered	
35	4-6-21	Data Preprocessing	covered	
36	7-6-21	Data Mining	covered	
37	8-6-21	Data Mining	covered	
38	9-6-21	Data visualization	covered	
39	10-6-21	Data visualization	covered	

SUMMARY

PLANNED DATE	ACTUAL DATE	TO:10.06.2021

ACTUAL CLASSES TAKEN	FROM: 25/5/21	TO: 18/6/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
40	11/06/21	MON	**Module-4:** Decision Trees	Covered	
41	14/06/21	TUE	Decision Trees	Covered	
42	15/06/21	WED	Decision Trees	covered	
43	16/06/21	THU	Decision Trees	Covered	
44	17/06/21	FRI	Regression	Covered	
45	18/06/21	MON	Regression	Covered	
46	21/06/21	TUE	Regression	Covered	
47	22/06/21	WED	Artificial Neural Networks	Covered	
48	23/06/21	THU	Artificial Neural Networks	Covered	
49	24/06/21	FRI	Artificial Neural Networks	Covered	
50	25/06/21	MON	Cluster Analysis	Covered	
51	28/06/21	TUE	Cluster Analysis	Covered	
52	29/06/21	WED	Association Rule Mining	Covered	

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -AUG 2021) MICRO SCHEDULE EVEN 20-21

SUBJECT	COMPUTER GRAPHICS AND VISUALIZATION	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS62	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	40 (Question paper will be set and evaluated for 40 marks and later reduced to 30)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/4/21	MON	**MODULE-1: Overview: Computer Graphics and OpenGL:** Computer Graphics:Basics of computer graphics, Application of Computer Graphics	Completed	
2	20/4/21	TUE	Video Display Devices: Random Scan and Raster Scan displays, color CRT monitors, Flat panel displays	Completed	
3	21/4/21	WED	Raster-scan systems: video controller, raster scan Display processor, graphics workstations and viewing systems, Input devices, graphics networks, graphics on the internet, graphics software	Completed	
4	22/4/21	THU	OpenGL: Introduction to OpenGL ,coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL	Completed	
5	24/4/21	SAT	OpenGL point functions, OpenGL line functions, point attributes,	Completed	
6	26/4/21	MON	OpenGL line attribute functions,	Completed	
7	27/4/21	TUE	line attributes, curve attributes, OpenGL point attribute functions	Completed	
8	28/4/21	WED	OpenGL line attribute functions	Completed	
9	29/4/21	THU	Line drawing algorithms(DDA	Completed	
10	3/5/21	SAT	Line drawing algorithms(DDA	Completed	

11	3/5/21	MON	Line drawing algorithms(DDA	Completed	
12	5/5/21	TUE	Line drawing algorithms(DDA	Completed	
13	6/5/21	WED	circle generation algorithms (Bresenham's)	Completed	
14	8/5/21	THU	circle generation algorithms (Bresenham's)	Completed	
15	10/5/21	SAT	circle generation algorithms (Bresenham's)	Completed	

SUMMARY

PLANNED DATE	**FROM: 19.04.2021**	**TO: 10.05.2021**	
ACTUAL CLASSES TAKEN	**FROM: 19.4.21**	**TO: 10.05.21**	
NUMBER OF CLASSES	**ALLOCATED: 15**	**TAKEN: 15**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** ✓	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE II

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
16	11/5/21	MON	**Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas.	Covered	
17	12/5/21	TUE	OpenGL polygon fill area functions, fill area attributes	Covered	
18	13/5/21	WED	general scan line polygon fill algorithm.	Covered	
19	15/5/21	THU	OpenGL fill-area attribute functions.	Covered	
20	17/5/21	SAT	2DGeometric Transformations: Basic 2D Geometric Transformations	Covered	
21	18/5/21	MON	matrix representations and homogeneous coordinates.	Covered	
22	19/5/21	TUE	Inverse transformations.	Covered	
23	20/5/21	WED	2DComposite transformations.	Covered	
24	22/5/21	THU	other 2D transformations.	Covered	

25	24/5/21	SAT	raster methods for geometric transformations,	Covered	
26	25/5/21	MON	OpenGL raster transformations,	Covered	
27	26/5/21	TUE	OpenGL raster transformations,	Covered	
28	27/5/21	WED	OpenGL geometric transformations,	Covered	
29	29/5/21	THU	function, 2D viewing: 2D viewing pipeline	Covered	
30	31/5/21	SAT	OpenGL 2D viewing functions.	Covered	

SUMMARY

PLANNED DATE	**FROM: 11.05.2021**	**TO: 31.05.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 15-5-21	**TO:** 31-5-21	
NUMBER OF CLASSES	**ALLOCATED: 15**	**TAKEN:** 15	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ: ✓	**SEMINARS:** ✓	**ANY OTHER:**

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MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	1-6-21	MON	**Module -3: Clipping,3D Geometric Transformations, Color and Illumination Models:**	Covered	
32	2-6-21	TUE	Clipping: clipping window,	Covered	
33	3-6-21	WED	normalization and viewport transformations,	Covered	
34	5-6-21	THU	clipping algorithms,2D point clipping,	Covered	
35	7-6-21	SAT	2D line clipping algorithms: cohen-sutherland line clipping only -polygon	Covered	

			fill area clipping:-	Covered	
36	8-6-21	MON	Sutherland-Hodgeman polygon clipping algorithm only	Covered	
37	9-6-21	TUE	3DGeometric Transformations: 3D translation, rotation, scaling,composite 3D transformations	Covered	
38	10-6-21	WED	other 3D transformations, affine transformations, OpenGL geometric transformations functions	Covered	
39	12-6-21	THU	Color Models: Properties of light,	Covered	
40	14-6-21	SAT	color models.	Covered	
41	15-6-21	MON	RGB and CMY color models. Illumination Models:	Covered	
42	16-6-21	TUE	Light sources.	Covered	
43	17-6-21	WED	basic illumination models-Ambient light,	Covered	
44	19-6-21	THU	diffuse reflection, specular and phong model,	Covered	
45	21-6-21	SAT	Corresponding openGL functions	Covered	

SUMMARY

PLANNED DATE	**FROM: 1.06.2021**	**TO:21.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 1/6/21	**TO:** 21/6/21	
NUMBER OF CLASSES	**ALLOCATED: 15**	**TAKEN:** 15	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ: ✓	**SEMINARS:** ✓	**ANY OTHER:**

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
46	22-6-21	MON	**3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts.	Covered	
47	23-6-21	TUE	3D viewing pipeline.	Covered	
48	24-6-21	WED	3D viewing pipeline.	Covered	
49	26-6-21	THU	3D viewing coordinate parameters	Covered	
50	28-6-21	SAT	3D viewing coordinate parameters	Covered	
51	29-6-21	MON	Transformation from world to viewing coordinates.	Covered	
52	30-6-21	TUE	Projection transformation.	Covered	
53	1-7-21	WED	orthogonal projections.	Covered	
54	3-7-21	THU	perspective projections.	Covered	
55	5-7-21	SAT	The viewport transformation and 3D screen coordinates.	Covered	
56	6-7-21	MON	OpenGL 3D viewing functions.	Covered	
57	7-7-21	TUE	Visible Surface Detection Methods:	Covered	
58	8-7-21	WED	Classification of visible surface Detection algorithms.	Covered	
59	10-7-21	THU	back face detection	Covered	
60	12-7-21	SAT	depth buffer method and OpenGL visibility detection functions	Covered	

SUMMARY

PLANNED DATE	**FROM:22.06.2021**	**TO: 12.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 22/6/21	**TO:** 12/7/21	
NUMBER OF CLASSES	**ALLOCATED: 15**	**TAKEN:** 15	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**

THE MODULE	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
61	13-7-21	MON	**Input& interaction, Curves and Computer Animation:** Input and Interaction:	Covered	
62	14-7-21	TUE	Input devices, clients and servers, Display Lists	Covered	
63	15-7-21	WED	Display Lists and Modelling.	Covered	
64	17-7-21	THU	Programming Event Driven Input.	Covered	
65	19-7-21	SAT	Menus Picking, Building Interactive Models.	Covered	
66	20-7-21	MON	Animating Interactive programs.	Covered	
67	21-7-21	TUE	Design of Interactive programs	Covered	
68	22-7-21	WED	Logic operations	Covered	
69	24-7-21	THU	Curved surfaces	Covered	
70	26-7-21	SAT	quadric surfaces	covered	
71	27-7-21	MON	OpenGL Quadric-Surface and Cubic-Surface Functions	Covered	
72	29-7-21	TUE	OpenGL Quadric-Surface and Cubic-Surface Functions	Covered	
73	31-7-21	WED	OpenGL Quadric-Surface and Cubic-Surface Functions	Covered	
74	2-8-21	THU	Bezier Spline Curves.	Covered	
75	3-8-21	SAT	Bezier surfaces.	Covered	
76	4-8-21	MON	OpenGL curve functions.	Covered	
77	5-8-21	TUE	Corresponding openGL functions	covered	
78	7-8-21	WED	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 13.07.2021	TO: 07.08.2021	
ACTUAL CLASSES TAKEN	FROM: 12/7/21	TO: 7/8/21	
NUMBER OF CLASSES	ALLOCATED: 18	TAKEN: 18	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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LESSON PLAN (APR -AUG 2021) MACROSCHEDULE

EVEN 20-21

SUBJECT	COMPUTER GRAPHICS AND VISUALIZATION	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS682	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	40 (Question paper will be set and evaluated for 40 marks and later reduced to 30)

Course Outcomes or Cos

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate Geometric transformations on both 2D and 3D objects.
- Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 10.05.2021	**Module-1:Overview: Computer Graphics and OpenGL:** Computer Graphics:Basics of computer graphics, Application of Computer Graphics, Video Display Devices: Random Scan and Raster Scan displays, color CRT monitors, Flat panel displays, Raster-scan systems: video controller, raster scan Display processor, graphics workstations and viewing systems, Input devices, graphics networks, graphics on the internet, graphics software. OpenGL: Introduction to OpenGL ,coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL, OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions, OpenGL line attribute functions, Line drawing algorithms(DDA, Bresenham's), circle generation algorithms (Bresenham's). **No. of Contact Sessions: 15**	https://www.youtube.com/watch?v=8Uou0GXS https://www.youtube.com/watch?v=xmFNuhw
2	11.05.2021 to 31.05.2021	**Module-2Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas, OpenGL polygon fill area functions, fill area attributes, general scan line polygon fill algorithm, OpenGL fill-area attribute functions. 2DGeometric Transformations: Basic 2D Geometric Transformations, matrix representations and homogeneous coordinates, Inverse transformations, 2DComposite transformations, other 2D transformations, raster methods for geometric transformations, OpenGL raster	https://www.youtube.com/results?search_query=Fill+area+Primitives%2C+2D+Geometric+Transformations+and+2D+viewing%3A

		transformations, OpenGL geometric transformations function, 2D viewing: 2D viewing pipeline, OpenGL 2D viewing functions. **No. of Contact Sessions: 15**	
3	01.06.2021 to 21.06.2021	**Module -3:Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping: clipping window, normalization and viewport transformations, clipping algorithms,2D point clipping, 2D line clipping algorithms: cohen-sutherland line clipping only -polygon fill area clipping: Sutherland-Hodgeman polygon clipping algorithm only.3DGeometric Transformations: 3D translation, rotation, scaling, composite 3D transformations, other 3D transformations, affine transformations, OpenGL geometric transformations functions. Color Models: Properties of light,color models, RGB and CMY color models. Illumination Models: Light sources,basic illumination models-Ambient light, diffuse reflection, specular and phong model, Corresponding openGL functions. **No. of Contact Sessions: 15**	https://www.youtube.com/results?search_query=Clipping%2C3D+Geometric+Transformations%2C+Color+and+Illumination+Models
4	22.06.2021 to 12.07.2021	**Module -43D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts, 3D viewing pipeline, 3D viewing coordinate parameters , Transformation from world to viewing coordinates, Projection transformation, orthogonal projections, perspective projections, The viewport transformation and 3D screen coordinates. OpenGL 3D viewing functions. Visible Surface Detection Methods: Classification of visible surface Detection algorithms, back face detection, depth buffer method and OpenGL visibility detection functions. **No. of Contact Sessions: 15**	https://www.youtube.com/results?search_query=3D+Viewing+and+Visible+Surface+Detection
5	13.07.2021 to 07.08.2021	**Module -5Input& interaction, Curves and Computer Animation:** Input and Interaction: Input devices, clients and servers, Display Lists, Display Lists and Modelling, Programming Event Driven Input, Menus Picking, Building Interactive Models, Animating Interactive programs, Design of Interactive programs, Logic operations .Curved surfaces, quadric surfaces, OpenGL Quadric-Surface and Cubic-Surface Functions, Bezier Spline Curves, Bezier surfaces, OpenGL curve functions, Corresponding openGL functions. **No. of Contact Sessions: 16**	https://www.youtube.com/results?search_query=Input%2C+interaction%2C+Curves+and+Computer+Animation

TEXT BOOKS:

1. Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd/ 4thEdition. Pearson Education,2011

2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL,5th edition. Pearson Education, 2008

REFERENCE BOOKS:

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Hughes Computer graphics with OpenGL: pearson education

2. Xiang, Plastock : Computer Graphics , sham's outline series, 2nd edition, TMG.

3. Kelvin Sung, Peter Shirley, steventlaer : Interactive Computer Graphics, concepts and applications, Cengage Learning

4. M Mlraiker, Computer Graphics using OpenGL, Filip learning/Elsevier

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SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEP - DEC 2022) MICRO SCHEDULE [ODD SEM 21-22]

SUBJECT	**Cryptography**	**STAFF NAME**	**Kiran G M**
SUBJECT CODE	**18CS744**	**SEM/SEC**	**VII A**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/09/22	MON	**Classical Encryption Techniques** Symmetric Cipher Model, Cryptography, Cryptanalysis and Brute-Force Attack	Covered	
2	26/09/22	MON	Substitution Techniques, Caesar Cipher, Monoalphabetic Cipher, Playfair Cipher, Hill Cipher	Covered	
3	28/09/22	WED	Polyalphabetic Cipher, One Time Pad. **Block Ciphers and the data encryption standard:** Traditional block Cipher structure	Covered	
4	29/09/22	THU	stream Ciphers and block Ciphers, Motivation for the feistel Cipher structure, the feistel Cipher	Covered	
5	01/10/22	SAT	The data encryption standard, DES encryption, DES decryption, A DES example	Covered	
6	03/10/22	MON	The avalanche effect, the strength of DES, the use of 56-Bit Keys	Covered	
7	06/10/22	THU	the nature of the DES algorithm, timing attacks	Covered	
8	08/10/22	SAT	Block cipher design principles	Covered	
9	10/10/22	MON	number of rounds, design of function F, key schedule algorithm	Covered	
10	12/10/22	WED	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 19.09.2022**	**TO: 12.10.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 19/9/22	**TO:** 12/10/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Kiran G M
Staff Incharge

Dr Basavesha D
HOD, CSE

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ENGINEERING & TECHNOLOGY
TUMKUR-572106

MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	13/10/22	THU	**Public-Key Cryptography and RSA:** Principles of public-key cryptosystems. Public-key cryptosystems	Covered	
12	15/10/22	SAT	Applications for public-key cryptosystems, requirements for public-key cryptosystems	Covered	
13	17/10/22	MON	public-key cryptanalysis. The RSA algorithm	Covered	
14	19/10/22	WED	description of the algorithm, computational aspects, the security of RSA	Covered	
15	20/10/22	THU	**Other Public-Key Cryptosystems:** Diffie-hellman key exchange,	Covered	
16	22/10/22	SAT	The algorithm, key exchange protocols	Covered	
17	31/10/22	MON	The algorithm, key exchange protocols	Covered	
18	02/11/22	WED	Elgamal Cryptographic systems	Covered	
19	03/11/22	THU	Elgâmal Cryptographic systems cont....	Covered	
20	05/11/22	SAT	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 13.10.2022	TO: 05.11.2022	
ACTUAL CLASSES TAKEN	FROM: 13/10/22	TO: 05/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Kiran G M
Staff Incharge

Dr Bhuvesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	07/11/22	MON	Elliptic curve arithmetic, abelian groups, elliptic curves over real numbers, elliptic curves over Zp	Covered	
22	09/11/22	WED	elliptic curves overGF(2m), Elliptic curve cryptography, Analog of Diffie-hellman key exchange,	Covered	
23	10/11/22	THU	Elliptic curve encryption/ decryption, security of Elliptic curve cryptography	Covered	
24	12/11/22	SAT	Pseudorandom number generation based on an asymmetric cipher	Covered	
25	14/11/22	MON	PRNG based on RSA	Covered	
26	16/11/22	WED	**Key Management and Distribution:** Symmetric key distribution using Symmetric encryption, A key distribution scenario	Covered	
27	17/11/22	THU	Hierarchical key control, session key lifetime, a transparent key control scheme, Decentralized key control	Covered	
28	19/11/22	SAT	controlling key usage, Symmetric key distribution using asymmetric encryption, simple secret key distribution	Covered	
29	21/11/22	MON	secret key distribution with confidentiality and authentication, A hybrid scheme, distribution of public keys,	Covered	
30	23/11/22	WED	public announcement of public keys, publicly available directory Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 07.11.2022	TO:23.11.2022	
ACTUAL CLASSES TAKEN	FROM: 7/11/22	TO: 23/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER: ✓

Mr. Kiran G M
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narasimhaiah
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	24/11/22	THU	X-509 certificates. Certificates, X-509 version 3, public key infrastructure	Covered	
32	26/11/22	SAT	**User Authentication:** Remote user Authentication principles, Mutual Authentication,	Covered	
33	28/11/22	MON	one way Authentication, remote user Authentication using Symmetric encryption	Covered	EXTRA
34	30/11/22	WED	Mutual Authentication, one way Authentication, Kerberos, Motivation , Kerberos version 4	Covered	
35	05/12/22	MON	Kerberos version 5, Remote user Authentication using Asymmetric encryption, Mutual Authentication, one way Authentication	Covered	EXTRA
36	07/12/22	WED	**Electronic Mail Security:** Pretty good privacy, notation, operational; description, S/MIME, RFC5322, Multipurpose internet mail extensions	Covered	
37	08/12/22	THU	S/MIME functionality, S/MIME messages, S/MIME certificate processing, enhanced security services	Covered	
38	10/12/22	SAT	Domain keys identified mail, internet mail architecture, E-Mail threats	Covered	
39	12/12/22	MON	DKIM strategy, DKIM functional flow.	Covered	
40	14/12/22	WED	Question paper discussion	Covered	EXTRA

SUMMARY

PLANNED DATE	FROM: 24.11.2022	TO: 14.12.2022	
ACTUAL CLASSES TAKEN	FROM: 24/11/22	TO: 14/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Kiran G M
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHREEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	15/12/22	THU	**IP Security:** IP Security overview, applications of IPsec, benefits of IPsec, Routing applications	Covered	
42	17/12/22	SAT	IPsec documents, IPsec services, transport and tunnel modes, IP Security policy, Security associations	Covered	
43	19/12/22	MON	Security associations database, Security policy database, IP traffic processing, Encapsulating Security payload	Covered	
44	21/12/22	WED	ESP format, encryption and authentication algorithms, Padding, Anti replay service	Covered	
45	22/12/22	THU	**Transport and tunnel modes**, combining security associations, authentication plus confidentiality,	Covered	EXTRA
46	24/12/22	SAT	**Transport and tunnel modes**, combining security associations, authentication plus confidentiality,	Covered	
47	26/12/22	MON	basic combinations of security associations, internet key exchange	Covered	
48	26/12/22	MON	key determinations protocol	Covered	
49	31/12/22	SAT	header and payload formats, cryptographic suits.	Covered	EXTRA
50	31/12/22	SAT	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 15.12.2022	TO: 31.12.2022	
ACTUAL CLASSES TAKEN	FROM: 15/12/22	TO: 31/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Kiran G M
Staff Incharge

Dr. Bhuvesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEP -DEC 2022) MACRO SCHEDULE

(ODD Sem 21-22)

SUBJECT	Cryptography	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS744	SEM/SEC	VII-A
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Define cryptography and its principles
- Explain Cryptography algorithms
- Illustrate Public and Private key cryptography
- Explain Key management, distribution and certification
- Explain authentication protocols

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.09.2022 to 12.10.2022	**Module- 1: Introduction** **Classical Encryption Techniques** Symmetric Cipher Model, Cryptography, Cryptanalysis and Brute-Force Attack, Substitution Techniques, Caesar Cipher, Monoalphabetic Cipher, Playfair Cipher, Hill Cipher, Polyalphabetic Cipher, One Time Pad. **Block Ciphers and the data encryption standard:** Traditional block Cipher structure, stream Ciphers and block Ciphers, Motivation for the feistel Cipher structure, the feistel Cipher, The data encryption standard, DES encryption, DES decryption, A DES example, results, the avalanche effect, the strength of DES, the use of 56-Bit Keys, the nature of the DES algorithm, timing attacks, Block cipher design principles, number of rounds, design of function F, key schedule algorithm **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=JW4kjrgiIs4 https://www.youtube.com/watch?v=JW4kjrgiIs4&list=RDCMLCIuuERN4LCMc0U73_dI5w0w2u&start_radio=1&v=JW4kjrgiIs4&t=9 https://www.youtube.com/watch?v=dIbZWaqIA-Ys
2	13.10.2022 to 05.11.2022	**Module -2** **Public-Key Cryptography and RSA:** Principles of public-key cryptosystems. Public-key cryptosystems. Applications for public-key cryptosystems, requirements for public-key cryptosystems. public-key cryptanalysis. The RSA algorithm, description of the algorithm, computational aspects, the security of RSA. **Other Public-Key Cryptosystems:** Diffie-hellman key exchange. The algorithm, key exchange protocols, man in the middle attack.Elgamal Cryptographic systems **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=4FOAHBOHfiM https://www.youtube.com/watch?v=wc9rHkHHBm https://www.youtube.com/watch?v=boZabuI2Q2A
		Module -3: Elliptic curve arithmetic, abelian groups, elliptic curves over real numbers, elliptic curves over Zp, elliptic curves overGF(2m), Elliptic curve cryptography, Analog of Diffie-hellman key	https://www.youtube.com/watch?v=dCxB-mbLT9w&t=10s https://www.youtube.com/watch?v=ypEXdL6QCQ

3	07.11.2022 to 23.11.2022	exchange, Elliptic curve encryption/ decryption, security of Elliptic curve cryptography, Pseudorandom number generation based on an asymmetric cipher, PRNG based on RSA. **Key Management and Distribution:** Symmetric key distribution using Symmetric encryption, A key distribution scenario, Hierarchical key control, session key lifetime, a transparent key control scheme, Decentralized key control, controlling key usage, Symmetric key distribution using asymmetric encryption, simple secret key distribution, secret key distribution with confidentiality and authentication, A hybrid scheme, distribution of public keys, public announcement of public keys, publicly available directory,public key authority, public keys certificates. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=xI14gvz0nA https://www.youtube.com/watch?v=RWsswAzQXk
4	24.11.2022 to 14.12.2022	**Module -4 :** X-509 certificates, Certificates, X-509 version 3, public key infrastructure **User Authentication:** Remote user Authentication principles, Mutual Authentication, one wayAuthentication, remote user Authentication using Symmetric encryption, Mutual Authentication, one way Authentication, Kerberos, Motivation , Kerberos version 4, Kerberos version 5, Remote user Authentication using Asymmetric encryption, Mutual Authentication, one way Authentication. **Electronic Mail Security:** Pretty good privacy, notation, operational description, S/MIME, RFC5322, Multipurpose internet mail extensions, S/MIME functionality, S/MIME messages, S/MIME certificate processing, enhanced security services, Domain keys identified mail, internet mail architecture, E-Mail threats, DKIM strategy, DKIM functional flow. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=ijPEGOmxZA https://www.youtube.com/watch?v=xAv2BWsqgC8 https://www.youtube.com/watch?v=79PJFKqd5vE https://www.youtube.com/watch?v=3JHCH33mFI8&list=PLBk6mvB3zGg_xracBeQEw2E3v4DWNOBE
5	15.12.2022 to 31.12.2022	**Module -5 :** **IP Security:** IP Security overview, applications of IPsec, benefits of IPsec, Routing applications, IPsec documents, IPsec services, transport and tunnel modes, IP Security policy, Security associations, Security associations database, Security policy database, IP traffic processing, Encapsulating Security payload, ESP format, encryption and authentication algorithms, Padding, Anti replay service **Transport and tunnel modes,** combining security associations, authentication plus confidentiality, basic combinations of security associations, internet key exchange, key determinations protocol, header and payload formats, cryptographic suits. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=ysiZBLaJqiU https://www.youtube.com/watch?v=QLudYucWbwM https://www.youtube.com/watch?v=kmHvk8Ngz88 https://www.youtube.com/watch?v=8v1RFn5Q_F8&list=PLLwgaL_SFmcArBlWmbs_vXN6mTK39FLIn

TEXT BOOKS:

1. William Stallings: Cryptography and Network Security, Pearson 6th edition.

REFERENCE BOOKS:

1. V K Pachghare: Cryptography and Information Security, PHI 2nd Edition

Mr. KiranG M
Staff Incharge

Dr Basavesha D
HOD, CSE

PRINCIPAL
Dr. SIDDAGANGA INSTITUTE OF TECHNOLOGY
ENGINEERING & TECHNOLOGY
TUMKUR - 572 103

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT -FEB 2022) MICROSCHEDULE (ODD 21-22)

SUBJECT	ATC	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS54	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	**Why study the Theory of Computation, Languages and Strings**: Strings, Languages.	Covered	
2	01/10/21	WED	A Language Hierarchy, Computation,	"	
3	08/10/21	THU	**Finite State Machines (FSM)**: Deterministic FSM,	"	
4	09/10/21	FRI	Regular languages,	"	
5	12/10/21	SAT	Designing FSM, Nondeterministic FSMs,	"	
6	13/10/21	TUE	From FSMs to Operational Systems, Simulators forFSMs,	"	
7	16/10/21	THU	Minimizing FSMs,	"	
8	19/10/21	FRI	Canonical form of Regular languages,	"	
9	21/10/21	MON	Canonical form of Regular languages,	"	
10	23/10/21	TUE	Bidirectional Transducers.	"	

SUMMARY

PLANNED DATE	FROM: 5.10.2021	TO: 23.10.2021	
ACTUAL CLASSES TAKEN	FROM: 5/10/21	TO: 23/10/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	26/10/21	FRI	RSA Operations	Covered	
12	27/10/21	THU	Why Does RSA Work? Performance, Applications	"	
13	28/10/21	MON	Practical Issues	"	
14	29/10/21	TUE	Public Key Cryptography Standard (PKCS)	"	
15	02/11/21	THU	Cryptographic Hash - Introduction, Properties	"	
16	04/11/21	FRI	Construction, Applications and Performance	"	
17	06/11/21	MON	The Birthday Attack	Covered	
18	09/11/21	TUE	Discrete Logarithm and its Applications Introduction	Covered	
19	10/11/21	THU	Diffie-Hellman Key Exchange	Covered	
20	11/11/21	FRI	Other Applications.	Covered	

SUMMARY

PLANNED DATE	FROM: 26.10.2021	TO: 11.11.2021	
ACTUAL CLASSES TAKEN	FROM: 26/10/21	TO: 11/11/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	12/11/21	MON	Introduction, Digital Certificates	Covered	
22	13/11/21	TUE	Public Key Infrastructure, Identity-based Encryption	Covered	
23	16/11/21	THU	Authentication–I - One way Authentication	Covered	
24	17/11/21	TUE	Mutual Authentication, Dictionary Attacks	Covered	
25	24/11/21	THU	Authentication – II – Centalised Authentication	Covered	
26	25/11/21	FRI	The Needham-Schroeder Protocol, Kerberos, Biometrics	Covered	
27	27/11/21	MON	IPSec- Security at the Network Layer – Security at Different layers: Pros and Cons	Covered	
28	30/11/21	TUE	IPSec in Action, Internet Key Exchange (IKE) Protocol, Security Policy and IPSEC	Covered	
29	01/12/21	THU	Virtual Private Networks, Security at the Transport Layer - Introduction,	Covered	
30	02/12/21	FRI	SSL Handshake Protocol, SSL Record Layer Protocol, OpenSSL.	Covered	

SUMMARY

PLANNED DATE	FROM: 12.11.2021	TO:02.12.2021	
ACTUAL CLASSES TAKEN	FROM: 12|11|21	TO: 2|12|21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	04/12/21	MON	IEEE 802.11 Wireless LAN Security - Background, Authentication	Covered	
32	07/12/21	TUE	Confidentiality and Integrity, Viruses, Worms, and Other Malware	Covered	
33	08/12/21	THU	Firewalls – Basics	Covered	
34	09/12/21	THU	Practical Issues, Intrusion Prevention and Detection - Introduction	Covered	
35	10/12/21	FRI	Prevention Versus Detection	Covered	
36	11/12/21	FRI	Types of Intruction Detection Systems	Covered	
37	16/12/21	MON	DDoS Attacks Prevention/Detection	Covered	
38	17/12/21	TUE	Web Service Security – Motivation	Covered	
39	18/12/21	THU	Technologies for Web Services	Covered	
40	21/12/21	TUE	WS- Security, SAML, Other Standards.	Covered	

SUMMARY

PLANNED DATE	FROM: 04.12.2021	TO: 21.12.2021	
ACTUAL CLASSES TAKEN	FROM: 4/12/21	TO: 21/12/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	01/01/22	THU	IT act aim and objectives	Covered	
42	04/01/22	MON	Scope of the act, Major Concepts	Covered	
43	05/01/22	TUE	Important provisions, Attribution, acknowledgement, and dispatch of electronic records	Covered	
44	07/01/22	THU	Secure electronic records and secure digital signatures	Covered	
45	08/01/22	FRI	Regulation of certifying authorities: Appointment of Controller and Other officers	Covered	
46	11/01/22	MON	Digital Signature certificates, Duties of Subscribers	Covered	
47	12/01/22	TUE	Penalties and adjudication	Covered	
48	13/01/22	THU	The cyber regulations appellate tribunal	Covered	
49	15/01/22	FRI	Offences, Network service providers not to be liable in certain cases,	Covered	
50	18/01/22	MON	Miscellaneous Provisions.	Covered	
51	19/01/22	TUE	Question paper discussion	Covered	
52	25/01/22	WED	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 01.01.2022	TO: 25.01.2022	
ACTUAL CLASSES TAKEN	FROM: 01/01/22	TO: 25/1/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021) MICROSCHEDULE (odd-21-22)

SUBJECT	ATC	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS54	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	10/10/21	MON	**Why study the Theory of Computation, Languages and Strings:** Strings, Languages.	Covered	
2	13/10/21	THU	A Language Hierarchy, Computation,	Covered	
3	14/10/21	FRI	**Finite State Machines (FSM):** Deterministic FSM,	Covered	
4	15/10/21	SAT	Regular languages,	Covered	
5	17/10/21	MON	Designing FSM, Nondeterministic FSMs,	Covered	
6	20/10/21	THU	From FSMs to Operational Systems, Simulators forFSMs,	Covered	
7	21/10/21	FRI	Minimizing FSMs,	Covered	
8	22/10/21	SAT	Canonical form of Regular languages,	Covered	
9	27/10/21	THU	Canonical form of Regular languages,	Covered	
10	28/10/21	FRI	Bidirectional Transducers.	Covered	

SUMMARY

PLANNED DATE	FROM: 10.10.2021	TO: 28.10.2021	
ACTUAL CLASSES TAKEN	FROM: 10/10/21	TO: 28/10/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: ✓	SEMINARS:	ANY OTHER:

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C V Subramukaswamy

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MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	29/10/21	SAT	Regular Expressions (RE): what is a RE?	Covered	
12	31/10/21	MON	Kleene"s theorem, Applications of REs	Covered	
13	03/11/21	THU	Problem Issues	Covered	
14	04/11/21	FRI	Manipulating and Simplifying REs. Regular Grammars	Covered	
15	05/11/21	SAT	Definition, Regular Grammars and Regular languages	Covered	
16	07/11/21	MON	Regular Languages (RL) and Non-regular Languages	Covered	
17	17/11/21	THU	How many RLs, To show that a language is regular	Covered	
18	18/11/21	FRI	Closure properties of RLs	Covered	
19	19/11/21	SAT	to show some languages are not RLs.	Covered	
20	21/11/21	MON	Other Applications.	Covered	

SUMMARY

PLANNED DATE	FROM: 29.10.2021	TO: 21.11.2021	
ACTUAL CLASSES TAKEN	FROM: 29/10/21	TO: 21/11/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: ✓	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

C V Sathyanarayanaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE III

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	24/11/21	THU	Context-Free Grammars(CFG): Introduction to Rewrite Systems and Grammars	Covered	
22	25/11/21	FRI	CFGs and languages, designing CFGs, simplifying CFGs	Covered	
23	26/11/21	SAT	proving that a Grammar is correct	Covered	
24	28/11/21	MON	Derivation and Parse trees, Ambiguity, Normal Forms	Covered	
25	01/12/21	THU	Pushdown Automata (PDA): Definition of non-deterministic PDA	Covered	
26	02/12/21	FRI	Deterministic and Non-deterministic PDAs	Covered	
27	03/12/21	SAT	, Nondeterminism and Halting	Covered	
28	05/12/21	MON	alternatives that are not equivalent to PDA	Covered	
29	08/12/21	THU	Pushdown Automata (PDA)	Covered	
30	09/12/21	FRI	Problems	Covered	

SUMMARY

PLANNED DATE	**FROM: 24.11.2021**	**TO:09.12.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 24/11/21	**TO:** 09/12/21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
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MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	10/12/21	SAT	Algorithms and Decision Procedures for CTLs	Covered	
32	12/12/21	MON	Decidable questions	Covered	
33	15/12/21	THU	Un-decidable questions	Covered	
34	22/12/21	THU	Turing Machine: Turing machine model	Covered	
35	23/12/21	FRI	Representation	Covered	
36	24/12/21	SAT	Language acceptability by TM	Covered	
37	26/12/21	MON	design of TM	Covered	
38	29/12/21	THU	Techniques for TM construction	Covered	
39	30/12/21	FRI	Variants of Turing Machines (TM)	Covered	
40	31/12/21	TUE	The model of Linear Bounded automata	Covered	

SUMMARY

PLANNED DATE	**FROM: 10.12.2021**	**TO: 31.12.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 10/12/21	**TO:** 31/12/21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
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MODULE V

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	02/01/22	MON	Decidability: Definition of an algorithm	Covered	
42	05/01/22	THU	decidability	Covered	
43	06/01/22	FRI	decidable languages	Covered	
44	07/01/22	SAT	Undecidable languages, halting problem of TM	Covered	
45	09/01/22	MON	, Post correspondence problem	Covered	
46	12/01/22	THU	Complexity: Growth rate 08 of functions	Covered	
47	13/01/22	FRI	the classes of P and NP	Covered	
48	14/01/22	SAT	Quantum Computation: quantum computers	Covered	
49	19/01/22	THU	Quantum Computation: quantum computers, ChurchTuring thesis	Covered	
50	20/01/22	MON	Applications: G.1 Defining syntax of programming language.	Covered	
51	26/01/22	THU	Question paper discussion	Covered	
52	25/01/22	WED	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 02.01.2022**	**TO: 25.01.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 02/01/22	**TO:** 25/1/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021– JAN 2022) MACRO SCHEDULE

ODD 21-22

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS72	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Understand fundamentals of Big Data analytics
- Explore the Hadoop framework and Hadoop Distributed File system
- Illustrate the concepts of NoSQL using MongoDB and Cassandra for Big Data
- Employ MapReduce programming model to process the big data
- Understand various machine learning algorithms for Big Data Analytics, Web Mining and Social Network Analysis.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	01.010.2021 to 30.10.2021	**Module-1:** Introduction to Big Data Analytics: Big Data, Scalability and Parallel Processing, Designing Data Architecture, Data Sources, Quality, Pre-Processing and Storing, Data Storage and Analysis, Big Data Analytics Applications and Case Studies. **No. of Contact Sessions: 13**	https://www.youtube.com/results?search_query=Introduction+to+Big+Data+Analytics
2	02.11.2021 to 24.11.2021	**Module-2** Introduction to Hadoop (T1): Introduction, Hadoop and its Ecosystem, Hadoop Distributed File System, MapReduce Framework and Programming Model, Hadoop Yarn, Hadoop Ecosystem Tools. Hadoop Distributed File System Basics (T2): HDFS Design Features, Components, HDFS User Commands. Essential Hadoop Tools (T2): Using Apache Pig, Hive, Sqoop, Flume, Oozie, HBase. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Introduction+to+Hadoop
3	26.11.2021 to 11.12.2021	**Module -3:** NoSQL Big Data Management, MongoDB and Cassandra: Introduction, NoSQL Data Store, NoSQL Data Architecture Patterns, NoSQL to Manage Big Data, Shared-Nothing Architecture for Big Data Tasks, MongoDB, Databases, Cassandra Databases. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=%3A+NoSQL+Big+Data+Management%2C+MongoDB+and+Cassandra

4	14.12.2021 to 05.01.2022	**Module -4** MapReduce, Hive and Pig: Introduction, MapReduce Map Tasks, Reduce Tasks and MapReduce Execution, Composing MapReduce for Calculations and Algorithms, Hive, HiveQL, Pig **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=MapReduce%2C+Hive+and+Pig
5	07.01.2022 to 29.01.2022	**Module -5** Machine Learning Algorithms for Big Data Analytics: Introduction, Estimating the relationships, Outliers, Variances, Probability Distributions, and Correlations, Regression analysis, Finding Similar Items, Similarity of Sets and Collaborative Filtering, Frequent Itemsets and Association Rule Mining. Text, Web Content, Link, and Social Network Analytics: Introduction, Text mining, Web Mining, Web Content and Web Usage Analytics, Page Rank, Structure of Web and analyzing a Web Graph, Social Network as Graphs and Social Network Analytics: **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Machine+Learning+Algorithms+for+Big+Data+Analytics

TEXT BOOKS:

Text Books:

1. Raj Kamal and Preeti Saxena, "Big Data Analytics Introduction to Hadoop, Spark, and Machine-Learning", McGraw Hill Education, 2018 ISBN: 9789353164966, 9353164966

2. Douglas Eadline, "Hadoop 2 Quick-Start Guide: Learn the Essentials of Big Data Computing in the Apache Hadoop 2 Ecosystem", 1 stEdition, Pearson Education, 2016. ISBN13: 978-9332570351

REFERENCE BOOKS:

1) Tom White, **"Hadoop: The Definitive Guide"**, 4 Edition, O'Reilly Media.

2) Boris Lublinsky, Kevin T.Smith, Alexey Yakubovich,**"Professional Hadoop Solutions"**, 1 st Edition, Wrox Press, 2014ISBN-13: 978-8126551071

3) Eric Sammer,**"Hadoop Operations: A Guide for Developers and Administrators"**,1st Edition, O'Reilly Media, 2012.ISBN-13: 978-9350239261

4. Arshdeep Bahga, Vijay Madisetti, "Big Data Analytics: A Hands-On Approach", 1st Edition, VPT Publications, 2018. ISBN-13: 978-0996025577

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 - JAN 2022) MICRO SCHEDULE

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	582	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

SL. No.	DATE	LESSON PLANNED	LESSON COVERED	REMARKS
1	05-10-21	ction to Big Data Analytics: Big Data	Completed	
2	08-10-21	lity and Parallel Processing.	Completed	
3	09-10-21	ng Data Architecture	Completed	
4	12-10-21	ng Data Architecture	Completed	
5	13-10-21	urces, Quality	Completed	
6	16-10-21	cessing and Storing	Completed	
7	19-10-21	cessing and Storing	Completed	
8	22-10-21	orage and Analysis	Completed	
9	23-10-21	orage and Analysis	Completed	
10	26-10-21	ta Analytics Applications and	Completed	
11	27-10-21	a Analytics Applications and	Completed	
12	29-10-21	udies.	Completed	
13	30-10-21	udies.	Completed	

SUMMARY

PLANNED	FROM: 05-10-21	TO: 30-10-21
ACTUAL	FROM: 5/10/21	TO: 30-10-21

NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
14	02-11-21	WED	**Module-2** Introduction to Hadoop (T1): Introduction	Completed	
15	06-11-21	FRI	Hadoop and its Ecosystem	Completed	
16	09-11-21	SAT	Hadoop Distributed File System,	Completed	
17	10-11-21	TUE	MapReduce Framework and Programming Model	Completed	
18	12-11-21	WED	Hadoop Yarn, Hadoop Ecosystem Tools.	Completed	
19	13-11-21	FRI	Hadoop Distributed File System Basics (T2): HDFS Design Features	Covered	
20	16-11-21	SAT	Components, HDFS User Commands	Completed	
21	17-11-21	TUE	Essential Hadoop Tools (T2): Using Apache Pig	Completed	
22	23-11-21	WED	Hive, Sqoop,	Completed	
23	24-11-21	FRI	Flume, Oozie, HBase.	Completed.	

SUMMARY

PLANNED DATE	FROM: 02-11-21	TO: 24-11-21	
ACTUAL CLASSES TAKEN	FROM: 2-11-21	TO: 23-11-21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE III				
Sl. No.	DATE	LESSON PLANNED	LESSON COVERED	REMARKS
24	26	s-3: NoSQL Big Data ystem.	Covered	
25	27	DB and Cassandra: ation,	Covered	
26	30	Data Store	Covered	
27	01	Data Store	Covered	
28	03	Data Architecture Patterns	Covered	
29	04	Data Architecture Patterns	Covered	
30	07	to Manage Big Data.	Covered	
31	08	Nothing Architecture for Big ata.	Covered	
32	10	OR, Databases.	Covered	
33	11	ra Databases.	Covered.	

SUMMARY

PL	M: 26-11-21	TO: 11-12-21	
ACTUAL CLASS TAKEN	M: 26/11/21	TO: 11/12/21	
NUMB	OCATED: 10	TAKEN: 10	
CONT		IA 2: ✓	IA 3:
VALU TH	GNMENTS:	TUTORIALS: -	QP DISCUSSION:
	s: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	14-12-21	FRI	MapReduce, Hive and Pig: Introduction	Covered	
35	154-12-21	SAT	MapReduce Map Tasks	Covered	
36	17-12-21	TUE	MapReduce Map Tasks	Covered	
37	18-12-21	WED	Reduce Tasks and MapReduce Execution.	Covered	
38	21-12-21	FRI	Reduce Tasks and MapReduce Execution.	Covered	
39	22-12-21	SAT	Composing MapReduce for Calculations and Algorithms	Covered	
40	24-12-21	TUE	Composing MapReduce for Calculations and Algorithms	Covered	
41	01-01-22	WED	Composing MapReduce for Calculations and Algorithms	Covered	
42	04-01-22	FRI	Hive, HiveQL, Pig	Covered	
43	05-01-22	SAT	Hive, HiveQL, Pig	Covered	

SUMMARY

PLANNED DATE	FROM: 14-12-21	TO: 05-01-22	
ACTUAL CLASSES TAKEN	FROM: 14/12/21	TO: 5/1/22	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V				
Sl. No.	DATE	LESSON PLANNED	LESSON COVERED	REMARKS
44	07-01-22	e -5 Machine Learning Algorithms Data Analytics:	Covered	
45	08-01-22	ction. Estimating the relationships, Variances,	Covered	
46	11-01-22	lity Distributions, and Correlations,	Covered	
47	17-01-22	sion analysis, Finding Similar Items,	Covered	
48	18-01-22	ity of Sets and Collaborative g,	Covered	
50	19-01-22	t Itemsets and Association Rule	Covered	
51	20-01-22	eb Content, Link, and Social k Analytics:	Covered	
52	25-01-22	ction, Text mining, Web Mining, ontent and Web Usage Analytics,	Covered	
53	27-01-22	nk, Structure of Web and analyzing Graph.:	Covered	
54	28-01-22	Network as Graphs and Social k Analytics	Covered	

SUMMARY

PL	M: 07-01-22	TO: 29-01-22
ACT	M: 9/1/22	TO: 28/1/22
NUMB	OCATED: 14	TAKEN: 14
CON		IA 2: IA 3: ✓
VAL	GNMENTS:	TUTORIALS: QP DISCUSSION:
	Z: ✓	SEMINARS: ✓ ANY OTHER:

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021– JAN 2022) MACRO SCHEDULE

ODD 21 - 22

SUBJECT	DATABASE MANAGEMENT SYSTEM	**STAFF NAME**	**RENUKARADHYA P C**
SUBJECT CODE	18CS52	**SEM/SEC**	**V/A**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

- Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS
- Use Structured Query Language (SQL) for database manipulation
- Design and build simple database systems
- Develop applications to interact with databases

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	04.10.2021 to 26.11.2021	Introduction to Databases: Introduction, Characteristics of database approach, Advantages of using a DBMS approach, History of database applications. Overview of Database Languages and Architecture: Data Models, Schemas, and Instances. Three schema architecture and data independence, DBMS languages, and interfaces, The Database System environment. Conceptual Data Modelling using Entities and Relationships: Entity types, Entity sets, Attributes, Roles, and structural constraints, Weak entity types, ER diagrams, examples, Specialization and Generalization Contact **Sessions: 11**	https://www.youtube.com/results?search_query=Introduction+to+Databases
2	27.10.2021 to 17.11.2021	Relational Model: Relational Model Concepts, Relational Model Constraints and relational database schemas, Update operations, transactions, and dealing with constraint violations. Relational Algebra: Unary and binary relational operations, additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra. Mapping Conceptual Design into a Logical Design: Relational Database design using ER-to-Relational mapping. SQL: SQL data definition and data types, specifying constraints in SQL, retrieval queries in SQL, INSERT,	https://www.youtube.com/results?search_query=Relational+Model

		DELETE, and UPDATE statements in SQL, Additional features of SQL. No. of Contact Sessions: 11	
3	23.11.2021 to 09.12.2022	Module -3 SQL : Advances Queries: More complex SQL retrieval queries, Specifying constraints as assertions and action triggers, Views in SQL, Schema change statements in SQL. Database Application Development: Accessing databases from applications, An introduction to JDBC, JDBC classes and interfaces, SQLJ, Stored procedures, Case study: The internet Bookshop, Internet Applications, The three-Tier application architecture, The presentation layer, The Middle Tier No. of Contact Sessions: 11	https://www.youtube.com/results?search_query=SQL
4	13.12.2021 to 04.01.2022	Module-4 Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies: Informal design guidelines for relation schemas, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms, Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form, Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decompositions, Algorithms for Relational Database Schema Design, Nulls, Dangling tuples, and Chase, Non-additive Join Decompositions, Further discussion of Multivalued Dependencies and 4NF, Other dependencies and Normal forms No. of Contact Sessions: 11	https://www.youtube.com/results?search_query=Normalization
5	05.01.2022 to 25.01.2022	Transaction Processing: Introduction to Transaction Processing, Transaction and System concepts, Desirable properties of Transactions, Characterizing schedules based on recoverability, Characterizing schedules based on Serializability, Transaction support in SQL. Concurrency Control in Databases: Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering, Multiversion concurrency control techniques, Validation concurrency control techniques, Granularity of Data items and Multiple Granularity Locking. Introduction to Recovery Protocols: Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update, Recovery techniques based on immediate update, Shadow paging, Database backup and recovery from catastrophic failures No. of Contact Sessions: 11	https://www.youtube.com/results?search_query=Transaction+Processing

TEXT BOOKS:

1. **Fundamentals of Database Systems, Ramez Elmasri and Shamkant B. Navathe, 7th Edition, 2017,**
2. **Pearson, 3. Database management systems, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill**

REFERENCE BOOKS:

1. Silberschatz Korth and Sudarshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.

2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design, Implementation and Management, Cengage Learning India.

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ENGINEERING & TECHNOLOGY
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SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 - JAN 2022) MICRO SCHEDULE Odd - 21-22

SUBJECT	DATABASE MANAGEMENT SYSTEM	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS53	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04-10-21	MON	**Module-1:** Introduction to Databases: Introduction,	Covered	
2	05-10-21	TUE	Characteristics of database approach, Advantages of using the DBMS approach,	Covered	
3	07-10-21	WED	History of database applications. Overview of Database Languages and Architectures	Covered	
4	11-10-21	THU	Data Models, Schemas, and Instances	Covered	
5	12-10-21	MON	Three schema architecture and data independence,	Covered	
6	13-10-21	TUE	database languages, and interfaces,	Covered	
7	18-10-21	WED	The Database System environment.	Covered	
8	19-10-21	THU	Conceptual Data Modelling using Entities and Relationships:	Covered	
9	21-10-21	MON	Entity types, Entity sets, attributes, roles, and structural constraints,	Covered	
10	25-10-21	TUE	Weak entity types, ER diagrams	Covered	
11	26-10-21	WED	examples, Specialization and Generalization	Covered	

SUMMARY

PLANNED DATE	FROM: 04-10-21	TO: 26-10-21
ACTUAL CLASSES TAKEN	FROM: 04/10/21	TO: 26/10/21
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 12

CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	27-10-21	THU	Relational Model: Relational Model Concepts,	Covered	
13	28-10-21	MON	Relational Model Constraints and relational database schemas	Covered	
14	02-11-21	TUE	Update operations, transactions, and dealing with constraint violations.	Covered	
15	04-11-21	WED	Relational Algebra: Unary and Binary relational operations	Covered	
16	08-11-21	THU	additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra	Covered	
17	09-11-21	MON	Mapping Conceptual Design into a Logical Design	Covered	
18	10-11-21	TUE	Relational Database Design using ER-to-Relational mapping.	Covered	
19	11-11-21	WED	SQL: SQL data definition and data types, specifying constraints in SQL	Covered	
20	15-11-21	THU	retrieval queries in SQL, INSERT,	Covered	
21	16-11-21	MON	DELETE, and UPDATE statements in SQL	Covered	
22	17-11-21	TUE	Additional features of SQL	Covered	

SUMMARY

PLANNED DATE	FROM: 27.11.2021	TO: 17.11.2021	
ACTUAL CLASSES TAKEN	FROM: 8-9|11|21	TO: 17|11|21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:

VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	23-11-21	WED	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries.	Covered	
24	24-11-21	THU	Specifying constraints as assertions and action triggers.	Covered	
25	25-11-21	MON	Views in SQL, Schema change statements in SQL.	Covered	
26	29-11-21	TUE	Database Application Development:.	Covered	
27	30-11-21	WED	Accessing databases from applications	Covered	
28	01-12-21	THU	An introduction to JDBC.	Covered	
29	03-12-21	MON	JDBC classes and interfaces.	Covered	
30	06-12-21	TUE	SQLJ, Stored procedures. Case study:	Covered	
31	07-12-21	WED	The internet Bookshop. Internet Applications:	Covered	
32	08-12-21	THU	The three-Tier application architecture.	Covered	
33	09-12-21	MON	The presentation layer, The Middle Tier	Covered	

SUMMARY

PLANNED DATE	FROM: 23.11.2021	TO: 09.12.2021	
ACTUAL CLASSES TAKEN	FROM: 23/11/21	TO: 9/12/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:

VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	13-12-21	MON	Module -4 Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies	Covered	
35	14-12-21	TUE	Informal design guidelines for relation schema, Functional Dependencies	Covered	
36	15-12-21	WED	Normal Forms based on Primary Keys, Second and Third Normal Forms,	Covered	
37	16-12-21	THU	Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form,	Covered	
38	20-12-21	MON	Join Dependencies and Fifth Normal Form,	Covered	
39	21-12-21	TUE	Normalization Algorithms: Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decompositions,	Covered	
40	22-12-21	WED	Algorithms for Relational Database Schema Design	Covered	
41	23-12-21	THU	Nulls, Dangling tuples,	Covered	
42	30-12-21	THU	Discussion for Relational Designs	Covered	
43	03-01-22	MON	Further discussion of Multivalued Dependencies and 4NF	Covered	
44	04-01-22	TUE	Join dependencies and Normal Forms	Covered	

SUMMARY

PLANNED DATE	FROM: 13.12.2021	TO: 04.01.2022

ACTUAL CLASSES TAKEN	FROM: 12/10/21	TO: 4/1/22	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE -	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	05-01-22	MON	**Module -5** Transaction Processing: Introduction to Transaction Processing.	Covered	
46	06-01-22	TUE	Transaction and System concepts, Desirable properties of Transactions.	Covered	
47	10-01-22	WED	Characterizing schedules based on recoverability, Characterizing schedules based on Serializability	Covered	
48	11-01-22	THU	Transaction support in SQL, Concurrency Control in Databases	Covered	
49	12-01-22	MON	Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering.	Covered	
50	13-01-22	TUE	Multiversion Concurrency control techniques, Validation Concurrency control techniques.	Covered	
51	17-01-22	WED	Granularity of Data items and Multiple Granularity Locking	Covered	
52	18-01-22	THU	Introduction to Database Recovery Protocols: Recovery Concepts.	Covered	
53	19-01-22	MON	NO-UNDO/REDO recovery based on Deferred update.	Covered	
54	24-01-22	TUE	Recovery techniques based on immediate update.	Covered	

55	25-01-22		Shadow paging, Database backup and recovery from catastrophic failures		

SUMMARY

PLANNED DATE	FROM: 08.01.2022	TO: 25.01.2022	
ACTUAL CLASSES TAKEN	FROM: 8/1/22	TO: 25/1/22	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS: ✓	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2022) MICRO SCHEDULE [Even SEM 21-22]

SUBJECT	OPERATING SYSTEM	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS43	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	23/05/22	TUE	**Introduction to OS, System structures:** What operating systems Does	Covered	
2	24/05/22	THU	Computer System architecture; Operating System structure; Operating System operations; Process management.	Covered	
3	25/05/22	FRI	Memory management; Storage management; Protection and security; Distributed system.	Covered	
4	27/05/22	SAT	Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface.	Covered	
5	28/05/22	TUE	System calls; Types of system calls; System programs.	Covered	
6	30/05/22	THU	Operating System design and implementation.	Covered	
7	31/05/22	FRI	Operating System structure.	Covered	
8	01/06/22	TUE	Virtual machines; Operating system generation; System boot.	Covered	
9	03/06/22	THU	**Process Management** Process concept; Process scheduling	Covered	
10	04/06/22	FRI	Operations on processes; Inter process communication	Covered	

SUMMARY

PLANNED DATE	FROM: 23.05.2022	TO: 04.06.2022	
ACTUAL CLASSES TAKEN	FROM: 23.05.2022	TO: 04.06.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C. Y. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	06/06/22	THU	**Multi-threaded Programming**: Multi-Threaded Programming: Overview	Covered	
12	07/06/22	SAT	Multithreading models.	Covered	
13	08/06/22	TUE	Thread Libraries; threading issues.	Covered	
14	09/06/22	THU	Process Scheduling: Basic concepts; Scheduling criteria.	Covered	
15	10/06/22	FRI	Scheduling algorithms.	Covered	
16	11/06/22	SAT	Multiple-Processor scheduling; Thread scheduling.	Covered	
17	13/06/22	TUE	**Process Synchronization:** Synchronization basic concepts.	Covered	
18	14/06/22	THU	Critical section problem; Peterson's solution; Synchronization hardware.	Covered	
19	16/06/22	FRI	Semaphores.	Covered	
20	17/06/22	SAT	Monitors.	Covered	

SUMMARY

PLANNED DATE	**FROM: 06.06.22**	**TO: 17.06.22**	
ACTUAL CLASSES TAKEN	**FROM: 06.06.2022**	**TO: 17.06.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/06/22	FRI	**DEADLOCKS:** System model; Deadlock characterization	Covered	
22	20/06/22	SAT	Methods for handling deadlocks.	Covered	
23	21/06/22	TUE	Deadlock prevention.	Covered	
24	22/06/22	THU	Deadlock avoidance.	Covered	
25	23/06/22	FRI	Deadlock detection and recovery from deadlock.	Covered	
26	24/06/22	SAT	Deadlocks continued.	Covered	
27	25/06/22	TUE	**Memory Management:** Memory management strategies: Background; Swapping.	Covered	
28	27/06/22	THU	Contiguous memory allocation; Paging.	Covered	
29	28/06/22	FRI	Structure of page table;	Covered	
30	29/06/22	SAT	Segmentation	Covered	

SUMMARY

PLANNED DATE	**FROM: 18.06.2022**	**TO:29.06.2022**	
ACTUAL CLASSES TAKEN	**FROM: 18.06.2022**	**TO: 29.06.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	30/06/22	FRI	**Virtual Memory Management**: Background.	Covered	
32	01/07/22	SAT	Demand paging.	Covered	
33	02/07/22	TUE	Copy-on-write; Page replacement.	Covered	
34	04/07/22	THU	Allocation of threads and thrashing.	Covered	
35	05/07/22	FRI	Implementing File System: File system structure.	Covered	
36	06/07/22	SAT	File system implementation; Directory implementation.	Covered	
37	07/07/22	TUE	Allocation methods.	Covered	
38	08/07/22	THU	Allocation methods Contd...	Covered	
39	09/07/22	FRI	Free space management	Covered	
40	11/07/22	SAT	Free space management Contd...	Covered	

SUMMARY

PLANNED DATE	**FROM: 30.06.2022**	**TO: 11.07.2022**	
ACTUAL CLASSES TAKEN	**FROM: 30.06.2022**	**TO: 11.07.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staffincharge

Prof. G.C Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
41	12/07/22	FRI	**Secondary Storage Structures, Protection:** Mass Storage structures; Disk structure.	Covered	
42	13/07/22	SAT	Disk attachment; Disk scheduling.	Covered	
43	14/07/22	TUE	Swap space management.	Covered	
44	15/07/22	THU	Protection: Goals of protection.	Covered	
45	16/07/22	FRI	Principles of protection, Domain of protection, Access matrix.	Covered	
46	18/07/22	SAT	Domain of protection, Access matrix.	Covered	
47	19/07/22	TUE	Implementation of access matrix.	Covered	
48	20/07/22	THU	Access matrix Continued	Covered	
49	21/07/22	FRI	Access control.	Covered	
50	22/07/22	SAT	Revocation of access rights. Capability-Based systems.	Covered	

SUMMARY

PLANNED DATE	**FROM: 12.07.2022**	**TO: 22.07.2022**	
ACTUAL CLASSES TAKEN	**FROM: 12.07.2022**	**TO: 22.07.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Staff Incharge

Prof. C. V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-FEB 2022) MICROSCHEDULE [EVEN 21-22]

SUBJECT	STORAGE AREA NETWORKS	STAFF NAME	Mr. Kiran G M
SUBJECT CODE	18CS821	SEM/SEC	VIII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	16/04/22	SAT	**Storage System: Introduction to Information Storage:** Information Storage,	Covered	
2	21/04/22	THU	Evolution of Storage Architecture,	Covered	
3	21/04/22	THU	Data Center Infrastructure	Covered	
4	22/04/22	FRI	Virtualization and Cloud Computing	Covered	
5	22/04/22	FRI	**Data Center Environment:** Application Database Management System (DBMS),	Covered	
6	23/04/22	SAT	Host (Compute), Connectivity, Storage,	Covered	
7	28/04/22	THU	Disk Drive Components	Covered	
8	28/04/22	THU	Disk Drive Performance	Covered	
9	29/04/22	FRI	Host Access to Data,	Covered	
10	29/04/22	FRI	Direct-Attached Storage	Covered	

SUMMARY

PLANNED DATE	16.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 16/4/22	TO: 29/4/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

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Dr. Narendra Viswanath
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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	Data Protection - RAID : RAID Implementation Methods	Covered	
12	04/05/22	THU	RAID Array Components, RAID Techniques	Covered	
13	04/05/22	THU	RAID Impact on Disk Performance	Covered	
14	05/05/22	FRI	RAID Comparison. **Intelligent Storage Systems :** Components of an Intelligent Storage System	Covered	
15	05/05/22	FRI	Components of an Intelligent Storage System	Covered	
16	06/05/22	SAT	Types of Intelligent Storage Systems.	Covered	
17	12/05/22	THU	**Fibre Channel Storage Area Networks - Fibre Channel:** Overview	Covered	
18	12/05/22	THU	The SAN and Its Evolution	Covered	
19	13/05/22	FRI	Components of FC SAN.	Covered	
20	13/05/22	FRI	Components of FC SAN.	Covered	

SUMMARY

PLANNED DATE	**FROM: 30.04.2022**	**TO: 13.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 30/4/22	**TO:** 13/5/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Staff Incharge

Prof. C. V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	14/05/22	SAT	**IP SAN and FCoE:** iSCSI, FCIP,	Covered	
22	19/05/22	THU	**Network-Attached Storage:** General-Purpose Servers versus NAS Devices,	Covered	
23	19/05/22	THU	Benefi ts of NAS,	Covered	
24	21/05/22	SAT	File Systems and Network File Sharing	Covered	
25	26/05/22	THU	File Systems and Network File Sharing	Covered	
26	26/05/22	THU	Components of NAS, ,	Covered	
27	27/05/22	FRI	NAS I/O Operation	Covered	
28	27/05/22	FRI	NAS Implementations	Covered	
29	28/05/22	SAT	NAS File-Sharing Protocols	Covered	
30	02/06/22	THU	Affecting NAS Performance	Covered	

SUMMARY

PLANNED DATE	**FROM: 14.05.2022**	**TO:02.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 14/5/22	**TO:** 02/6/22	
NUMBER OF CLASSES	**ALLOCATED:** 10	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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ENGINEERING & TECHNOLOGY
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MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	02/06/22	THU	**Introduction to Business Continuity:** Information Availability	Covered	
32	03/06/22	FRI	BC Terminology, BC Planning Life Cycle	Covered	
33	03/06/22	FRI	Failure Analysis, Business Impact Analysis	Covered	
34	04/06/22	SAT	BC Technology Solutions	Covered	
35	09/06/22	THU	**Backup and Archive:** Backup Purpose	Covered	
36	09/06/22	THU	Backup Considerations, Backup Granularity	Covered	
37	10/06/22	FRI	Recovery Considerations, Backup Methods	Covered	
38	10/06/22	FRI	Backup Architecture	Covered	
39	11/06/22	SAT	Backup and Restore Operations, Backup Topologies, Backup in NAS Environments	Covered	

SUMMARY

PLANNED DATE	**FROM: 02.06.2022**	**TO: 11.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 02/6/22	**TO:** 11/6/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
40	16/06/22	THU	**Local Replication:** Replication Terminology, Uses of Local Replicas,	Covered	
41	16/06/22	THU	Replica Consistency , Local Replication Technologies	Covered	
42	23/06/22	THU	Tracking Changes to Source and Replica , Restore and Restart Considerations	Covered	
43	23/06/22	THU	Creating Multiple Replicas, **Remote Replication:** Modes of Remote Replication	Covered	
44	24/06/22	FRI	Remote Replication Technologies	Covered	
45	24/06/22	FRI	**Securing the Storage Infrastructure:** Information Security Framework,	Covered	
46	25/06/22	SAT	Information Security Framework,	Covered	
47	25/06/22	SAT	Risk Triad,	Covered	**EXTRA**
48	25/06/22	SAT	Storage Security Domains	Covered	**EXTRA**
49	30/06/22	THU	Security Implementations in Storage Networking	Covered	
50	30/06/22	THU	REVISION	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.06.2022**	**TO: 30.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 16/6/22	**TO:** 30/6/22	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSIONS** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Kiran G M
Staff Incharge

Prof. C.V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEsVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (DEC-MAR 2021-22) MACRO SCHEDULE

COURSE	**PROBLEM SOLVING THROUGH PROGRAMMING**	**STAFF NAME**	**Mr SUTHAN R**
COURSE CODE	**21PSP23/13**	**SEM/SEC**	**I / 'D' Section**
IA Marks (CIE)	**50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)**	**Maximum Exam Marks (SEE)**	**50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)**

Course Outcomes or COs

1. Elucidate the basic architecture and functionalities of a computer and also recognizethe hardware parts.
2. Apply programming constructs of C language to solve the real world problem.
3. Explore user-defined data structures like arrays in implementing solutions toproblems like searching and sorting.
4. Explore user-defined data structures like structures, unions and pointers inimplementing solutions.
5. Design and Develop Solutions to problems using modular programming constructs using functions.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	06.01.2022 to 14 .01.2022	**Module 1:Introduction to Computer Hardware and Software:** Computer generations, computer types, bits, bytes and words, CPU, Primary memory, Secondary memory, ports and connections, input devices, output devices, Computers in a network, Network hardware, Software basics, softwaretypes. **Overview of C:** Basic structure of C program, executing a C program. Constant, variable and data types, Operators and expressions. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=J8i_5HKSPJ4 https://www.youtube.com/watch?v=TxvLSJN8w9s https://www.youtube.com/watch?v=mX9BmtEGJJM https://www.youtube.com/watch?v=HucJbUkDIuk https://www.youtube.com/watch?v=fPWKOcRB6NQ&list=PLd9C_6qdAvBEnL9xe5J-FXSx80OMb4Pv3
2	15.01.2022 to 28 .01.2022	**Module -2:** Managing Input and output operations. Conditional Branching and Loops. Example programs, finding roots of a quadratic equation, computation of binomial coefficients, plotting of Pascal's triangle **No. of Contact Sessions:11**	https://www.youtube.com/watch?v=Dhnlc530o_I4 https://www.youtube.com/watch?v=ntwg2e0vI8o https://www.youtube.com/watch?v=fPWKOcRB6NQ&list=PLd9C_6qdAvBEnL9xe5J-FXSx80OMb4Pv3
3	29.02.2022 to 15 .02.2022	**Module -3: Arrays:** Arrays (1-D, 2-D), Character arrays and Strings, Basic Algorithms: Searching and Sorting **Algorithms** (Linear search, Binary search, Bubble sort and Selection sort). **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=0BkWxtuFPJI https://www.youtube.com/watch?v=HMHYWbxPBI4 https://www.youtube.com/watch?v=_TxbxB3PBIs https://www.youtube.com/watch?v=ZMCnbjAWiA

4	16.02.2022 to 04 .03.2022	**Module –4:** User Defined Functions and Recursion. Example programs: Finding Factorial of a positive integer, GCD of two numbers and Fibonaccisequence. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=t9WKOcRB63Q&list=PLJ5C_6qdAvBFzL9su5J-FX8x80BMbkPv1
5	05.03.2022 to 22 .03.2022	**Module -5** Structures, Unions and Pointers, Pre-processor Directives and Example Programs like Addition of two complex numbers using structures , compute the sum, mean and standard deviation of all elements stored in an array of N real numbers using pointers.. **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=t9WKOcRB63Q&list=PLJ5C_6qdAvBFzL9su5J-FX8x80BMbkPv1

Textbooks:

1. E. Balagurusamy, Programming in ANSI C, 7th Edition, Tata McGraw-Hill
2. Brian W. Kernighan and Dennis M. Ritchie, The 'C' Programming Language, PrenticeHall of India.

Reference Books:

1. Reema Thereja , Programming in C , Cengage public

Web links and Video Lectures (e-Resources):

1. elearning.vtu.ac.in/econtent/courses/video/BS/15PCD23.html
2. https://nptel.ac.in/courses/106/105/106105171/
3. **https://www.youtube.com/watch?v=t9WKOcRB63Q&list=PLJ5C_6qdAvBFzL9su5J-FX8x80BMbkPv1**

MOOC courses can be adopted for more clarity in understanding the topics and verities of problem solving methods.

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

1. Real world problem solving using group discussion. E.g., Electricity bill generation. etc.,
2. Demonstration of solution to a problem through programming.
3. Demonstration of simple project and motivating the students to develop similar type of projects.

Rathan R.
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR-572105

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (DEC-MAR 2021-22) MICROSCHEDULE

COURSE	PROBLEM SOLVING THROUGH PROGRAMMING	STAFF NAME	Mr SUTHAN R
COURSE CODE	21PSP23 / 13	SEM/SEC	I / 'D' Section
IA Marks (CIE)	50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)	Maximum Exam Marks (SEE)	50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	06/01/22	TUE	Computer generations, computer types, bits, bytes and words	Covered	
2	04/01/22	TUE	CPU, Primary memory, Secondary memory, ports and connections	Covered	
3	05/01/22	WED	Input devices, output devices, Computers in a network	Covered	
4	06/01/22	THUR	Network hardware, Software basics, software types.	Covered	
5	07/01/22	FRI	Basic structure of C program	Covered	
6	08/01/22	SAT	Executing a C program Constant	Covered	
7	11/01/22	TUE	variable and data types	Covered	
8	11/01/22	TUE	Operators expressions	Covered	
9	12/01/22	WED	Operators expressions CONT...	Covered	
10	13/01/22	THUR	TUTORIAL	Covered	
11	14/01/22	FRI	TUTORIAL	Covered	

SUMMARY

PLANNED DATE	06.01.2022	TO: 14.01.2022	
ACTUAL CLASSES TAKEN	FROM: 16.01.22	TO: 14.01.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: ✓	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	15/01/22	SAT	Managing Input and output operations	Covered	
13	18/01/22	TUE	Conditional Branching and Example programs	Covered	
14	18/01/22	TUE	finding roots of a quadratic equation	Covered	
15	19/01/22	WED	Loops.	Covered	
16	20/01/22	THUR	Example programs	Covered	
17	21/01/22	FRI	Example programs continued	Covered	
18	22/01/22	SAT	Plotting of Pascal's	Covered	
19	25/01/22	TUE	Computation of binomial coefficients	Covered	
20	25/01/22	TUE	Solving Real world Problem [generating electricity Bill]	Covered	
21	27/01/22	THU	TUTORIAL	Covered	
22	28/01/22	FRI	QUIZ1 – Conduction	Covered	

SUMMARY

PLANNED DATE	FROM: 15.01.2022	TO: 28.01.2022	
ACTUAL CLASSES TAKEN	FROM: 15.01.22	TO: 28.1.22.	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: ✓	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal

PRINCIPAL
SAHYADRI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	29/02/22	SAT	Arrays: Definition	Covered	
24	03/03/22	THU	1D-Array Declaration and Initialization	Covered	
25	04/02/22	FRI	Linear search: Algorithm and program	Covered	
26	05/02/22	SAT	Binary search: Algorithm and program	Covered	
27	08/02/22	TUE	Bubble sort: Algorithm and program	Covered	
28	08/02/22	TUE	Selection sort: Algorithm and program	Covered	
29	09/02/22	WED	2D-Array Declaration and Initialization	Covered	
30	10/02/22	THUR	Strings Declaration: String manipulation functions	Covered	
31	11/02/22	FRI	strcat(), strcmp()	Covered	
32	12/02/22	SAT	TUTORIAL	Covered	
33	15/02/22	TUE	TUTORIAL	Covered	

SUMMARY

PLANNED DATE	FROM: 29.02.2022	TO:15.02.2022	
ACTUAL CLASSES TAKEN	FROM: 29.02.22	TO: 15.03.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: ✓	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	16/02/22	WED	Functions: Definition And Introduction, Types	Covered	
35	17/02/22	THU	Types of User defined Functions with example	Covered	
36	18/02/22	FRI	Examples of user defined function :To compute factorial of given number using functions.	covered	
37	19/02/22	SAT	Examples of user defined function continued	Covered	
38	22/02/22	TUE	Recursive Functions: Definition with example	Covered	
39	22/02/22	TUE	Example for recursive function :To compute factorial of a given number using recursive function.	Covered	
40	23/02/22	WED	Example for recursive function :To compute GCD of two positive numbers using recursive function.	Covered	
41	24/02/22	THUR	Fibonacci sequence	Covered	
42	25/02/22	FRI	TUTORIAL	Covered	
43	26/02/22	SAT	TUTORIAL	Covered	
44	04/03/22	FRI	QUIZ 2 –Conduction	Covered	

SUMMARY

PLANNED DATE	FROM: 16.02.2022	TO: 04.03.2022	
ACTUAL CLASSES TAKEN	FROM: 16.02.22.	TO: 04.03.22.	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓ 50%	IA 3: ✓ 50%
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: ✓	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Dr. C. Nagaraj
Head of the Department

Dr. Narendra Viswanath
Principal
PRINCIPAL
INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
45	05/03/22	SAT	Structures: Definition and syntax with a simple example	Covered	
46	08/03/22	TUE	Addition of two complex numbers using structures	Covered	
47	10/03/22	THU	Unions: Definition and syntax with a simple example	Covered	
48	11/03/22	FRI	Pointers: Definition and syntax with a simple example	Covered	
49	12/03/22	SAT	Compute the sum,mean and standard deviation of all elements stored in an array of N real numbers using pointers.	Covered	
50	15/03/22	TUE	Pointers continued.....	Covered	
51	17/03/22	THU	Pointers continued.....	Covered	
52	18/03/22	FRI	Discussion to solve previous year question Paper	Covered	
53	22/03/22	TUE	Discussion to solve previous year question Paper	Covered	

SUMMARY

PLANNED DATE	**FROM: 05.03.2022**	**TO: 22.03.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 05.04.22	**TO:** 22.04.22	
NUMBER OF CLASSES	**ALLOCATED: 09**	**TAKEN:** 09	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEsVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (MAY -AUG 2022) MACRO SCHEDULE

COURSE	**PROBLEM SOLVING THROUGH PROGRAMMING**	**STAFF NAME**	**PROF. SHANMUKA SWAMY C.V.**
COURSE CODE	**21PSP23/13**	**SEM/SEC**	**II / 'A' Section**
IA Marks (CIE)	**50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)**	**Maximum Exam Marks (SEE)**	**50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)**

Course Outcomes or COs

1. Elucidate the basic architecture and functionalities of a computer and also recognizethe hardware parts.
2. Apply programming constructs of C language to solve the real world problem.
3. Explore user-defined data structures like arrays in implementing solutions toproblems like searching and sorting.
4. Explore user-defined data structures like structures, unions and pointers inimplementing solutions.
5. Design and Develop Solutions to problems using modular programming conctructs using functions.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	06.06.2022 to 20 .06.2022	**Module 1:Introduction to Computer Hardware and Software:** Computer generations, computer types, bits, bytes and words, CPU, Primary memory, Secondary memory, ports and connections, input devices, output devices, Computers in a network, Network hardware, Software basics, softwaretypes. **Overview of C:** Basic structure of C program, executing a C program. Constant, variable and data types, Operators and expressions. **No. of Contact Sessions:** 11	https://www.youtube.com/watch?v=iNc_9HKSPI0 https://www.youtube.com/watch?v=EkvLN38Sw4s https://www.youtube.com/watch?v=gOOYmHEG3N8 https://www.youtube.com/watch?v=HwBdA8Ub6 https://www.youtube.com/watch?v=gWkKdvRI63Q&list=PLJPC_6udAvBFyL8w8J-FX8v80MbbPv1
2	21.06.2022 to 05 .07.2022	**Module -2:** Managing Input and output operations. Conditional Branching and Loops. Example programs, finding roots of a quadratic equation, computation of binomial coefficients, plotting of Pascal's triangle **No. of Contact Sessions:11**	https://www.youtube.com/watch?v=0bn6cVMa_1c https://www.youtube.com/watch?v=ovv3n0_1Rc https://www.youtube.com/watch?v=gWkKdvRI63Q&list=PLJPC_6udAvBFyL8w8J-FX8v80MbbPv1
3	06.07.2022 to 23 .07.2022	**Module -3: Arrays:** Arrays (1-D, 2-D), Character arrays and Strings, Basic Algorithms: Searching and Sorting **Algorithms** (Linear search, Binary search, Bubble sort and Selection sort). **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=0HJ6YvqGPNI https://www.youtube.com/watch?v=HNBUWkuF9n8 https://www.youtube.com/watch?v=_Tyl-x0JFHo https://www.youtube.com/watch?v=FHC_mtAWAA

4	25.07.2022 to 13 .08.2022	**Module -4:** User Defined Functions and Recursion. Example programs: Finding Factorial of a positive integer, GCD of two numbers and Fibonacciseqeuence. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=t9WKOcRI63Q&list=PLJSC_6qdA-BEzL9nS3-FX8x80BMbkPy1
5	16.08.2022 to 30 .08.2022	**Module -5** Structures, Unions and Pointers, Pre-processor Directives and Example Programs like Addition of two complex numbers using structures , compute the sum, mean and standard deviation of all elements stored in an array of N real numbers using pointers.. **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=t9WKOcRI63Q&list=PLJSC_6qdA-BEzL9nS3-FX8x80BMbkPy1

Textbooks:

1. E. Balaguruswamy, Programming in ANSI C, 7th Edition, Tata McGraw-Hill
2. Brian W. Kernighan and Dennis M. Ritchie, The 'C' Programming Language, PrenticeHall of India

Reference Books:

1. Reema Thereja , Programming in C , Cengage public

Web links and Video Lectures (e-Resources):

1. elearning.vtu.ac.in/econtent/courses/video/BS/15PCD23.html
2. https://nptel.ac.in/courses/106/105/106105171/
3. **https://www.youtube.com/watch?v=t9WKOcRI63Q&list=PLJSC_6qdA-BEzL9nS3-FX8x80BMbkPy1**

MOOC courses can be adopted for more clarity in understanding the topics and verities of problem solving methods.

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

1. Real world problem solving using group discussion. E.g., Electricity bill generation etc...
2. Demonstration of solution to a problem through programming.
3. Demonstration of simple project and motivating the students to develop similar type of projects.

Prof Shanmuka Swamy C V
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (MAY-AUG2022) MICROSCHEDULE

COURSE	PROBLEM SOLVING THROUGH PROGRAMMING	STAFF NAME	PROF. SHANMUKASWAMY CV
COURSE CODE	21PSP23 / 13	SEM/SEC	II / 'A' Section
IA Marks (CIE)	50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)	Maximum Exam Marks (SEE)	50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	06/06/22	MON	Computer generations, computer types, bits, bytes and words	Covered	
2	07/06/22	TUE	CPU, Primary memory, Secondary memory, ports and connections	Covered	
3	08/06/22	WED	Input devices, output devices, Computers in a network	Covered	
4	09/06/22	THUR	Network hardware, Software basics, software types.	Covered	
5	11/06/22	SAT	Basic structure of C program	Covered	
6	13/06/22	MON	Executing a C program Constant	Covered	
7	14/06/22	TUE	variable and data types	Covered	
8	15/06/22	WED	Operators expressions	Covered	
9	16/06/22	THUR	Operators expressions CONT....	Covered	
10	18/06/22	SAT	TUTORIAL	covered	
11	20/06/22	MON	TUTORIAL	Covered	

SUMMARY

PLANNED DATE	06.06.2022	TO: 20.06.2022	
ACTUAL CLASSES TAKEN	FROM: 6/6/22	TO: 20/6/22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ: Yes	SEMINARS: *	ANY OTHER:

Prof Shanmukha Swamy CV
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	21/06/22	TUE	Managing Input and output operations	Covered	
13	22/06/22	WED	Conditional Branching and Example programs	Covered	
14	23/06/22	THUR	finding roots of a quadratic equation	Covered	
15	25/06/22	SAT	Loops.	Covered	
16	27/06/22	MON	Example programs	Covered	
17	28/06/22	TUE	Example programs continued	Covered	
18	29/06/22	WED	Plotting of Pascal's	Covered	
19	30/06/22	THUR	Computation of binomial coefficients	Covered	
20	02/07/22	SAT	Solving Real world Problem [generating electricity Bill]	Covered	
21	04/07/22	MON	TUTORIAL	Covered	
22	05/07/22	TUE	QUIZ1 – Conduction	Covered.	

SUMMARY

PLANNED DATE	FROM: 21.06.2022	TO: 05.07.2022	
ACTUAL CLASSES TAKEN	FROM: 21.6.22.	TO: 05.7.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ½ ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: Yes	QP DISCUSSION: Yes
	QUIZ: Quiz1	SEMINARS:	ANY OTHER:

Prof Shanmuka Swamy C V
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Princi**PRINCIPAL**
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	06/07/22	WED	Arrays: Definition	Covered	
24	07/07/22	THUR	1D-Array Declaration and Initialization	Covered	
25	12/07/22	TUE	Linear search: Algorithm and program	Covered	
26	13/07/22	WED	Binary search: Algorithm and program	Covered	
27	14/07/22	THUR	Bubble sort: Algorithm and program	Covered	
28	16/07/22	SAT	Selection sort: Algorithm and program	Covered	
29	18/07/22	MON	2D-Array Declaration and Initialization	Covered	
30	19/07/22	TUE	Strings Declaration: String manipulation functions	Covered	
31	20/07/22	WED	streat(), strcmp()	Covered	
32	21/07/22	THUR	TUTORIAL	Covered	
33	23/07/22	SAT	TUTORIAL	Covered -	

SUMMARY

PLANNED DATE	FROM: 06.07.2022	TO:23.07.2022	
ACTUAL CLASSES TAKEN	FROM: 6/7/22	TO: 23/7/22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: NO	IA 2: Yes	IA 3: NO
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: Yes	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER:

Prof Shanmukh Swaroop K V
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
Principal

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ENGINEERING & TECHNOLOGY
TUMKUR - 5...

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	25/07/22	MON	Functions: Definition And Introduction, Types	Covered	
35	26/07/22	TUE	Types of User defined Functions with example	Covered	
36	27/07/22	WED	Examples of user defined function :To compute factorial of given number using functions.	Covered	
37	28/07/22	THUR	Examples of user defined function continued	Covered	
38	30/07/22	SAT	Recursive Functions: Definition with example	Covered	
39	01/08/22	WED	Example for recursive function :To compute factorial of a given number using recursive function.	Covered	
40	02/08/22	TUE	Example for recursive function :To compute GCD of two positive numbers using recursive function.	Covered	
41	03/08/22	WED	Fibonacci sequence	Covered	
42	04/08/22	THUR	TUTORIAL	Covered	
43	11/08/22	THUR	TUTORIAL	Covered	
44	13/08/22	SAT	QUIZ 2 -Conduction	Covered	

SUMMARY

PLANNED DATE	FROM: 25.07.2022	TO: 13.08.2022	
ACTUAL CLASSES TAKEN	FROM: 25/7/22	TO:	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1: Nil	IA 2: Nil	IA 3: ✓ Evaluated
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: Quiz 2 conducted.	SEMINARS:	ANY OTHER:

Prof Sumangala Swamy C V
Staff Incharge

Dr. C. Nagaraja
Head of the Department

PRINCIPAL
Dr. AMC ENGINEERING COLLEGE
Principal & TECHNOLOGY
TUMKUR - 572106

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	16/08/22	TUE	Structures: Definition and syntax with a simple example	Covered	
46	17/08/22	WED	Addition of two complex numbers using structures	Covered	
47	18/08/22	THUR	Unions: Definition and syntax with a simple example	Covered	
48	20/08/22	SAT	Pointers: Definition and syntax with a simple example	Covered	
49	22/08/22	MON	Compute the sum,mean and standard deviation of all elements stored in an array of N real numbers using pointers.	Covered	
50	23/08/22	TUE	Pointers continued.....	Covered	
51	24/08/22	WED	Pointers continued.....	Covered	
52	25/08/22	THUR	Discussion to solve previous year question Paper	Covered	
53	30/08/22	TUE	Discussion to solve previous year question Paper	Covered	

SUMMARY

PLANNED DATE	FROM: 16.08.2022	TO: 30.08.2022	
ACTUAL CLASSES TAKEN	FROM: 16/8/22	TO: 30/8/22	
NUMBER OF CLASSES	ALLOCATED: 09	TAKEN: 09	
CONTENT COVERED FOR IA	IA 1: —	IA 2: —	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: Yes	OF DISCUSSION: Yes
	QUIZ: —	SEMINARS: -	ANY OTHER: —

Prof Shanmuka Shastry CV
Staff Incharge

Dr. C. Nagaraja
Head of the Department

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (MAY -AUG 2022) MACROSCHEDULE

COURSE	PROBLEM SOLVING THROUGH PROGRAMMING	STAFF NAME	Dr.Suhas G K
COURSE CODE	21PSP23/13	SEM/SEC	II
IA Marks (CIE)	50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)	Maximum Exam Marks (SEE)	50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)

Course Outcomes or COs

1. Elucidate the basic architecture and functionalities of a computer and also recognizethehardware parts.
2. Applyprogrammingconstructsof'C'languagetosolvetherealWorldproblems.
3. Explore user-defined data structures like arrays in implementing solutions toproblems like searchingandsorting.
4. Explore user-defined data structures like structures, unions and pointers inimplementingsolutions.
5. DesignandDevelopSolutionstoproblemsusingmodularprogrammingconstructsusingfunctions.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	06.06.2022 to 08.06.2022	**Module 1:IntroductiontoComputerHardwareandSoftware:**Computergenerations,computertypes,bits,bytesandwords,CPU, Primarymemory,Secondarymemory,portsandconnections,Inputdevices,outputdevices,Computersinanetwork,Network hardware,Softwarebasics,softwaretypes. **OverviewofC:**Basicstructureof'C'program,executing'C'program.Constant,variableand datatypes,Operatorsandexpressions. **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=J6q_3HK8P34 https://www.youtube.com/watch?v=3xxL3255e5s https://www.youtube.com/watch?v=m55Bnnl8.Q5M https://www.youtube.com/watch?v=Bnn.B63dMeh https://www.youtube.com/watch?v=d9WkOnHB63Q&list=PL0W_6qgUyIEzL5wN3-EXBx000V0bAPz1
2	09.06.2022 to 28 .06.2022	**Module -2:**Managing Input and output operations. Conditional Branching and Loops. Example programs,findingrootsofaquadraticequation,computationof binomialcoefficients,plottingofPascal's triangle **No. of Contact Sessions:08**	https://www.youtube.com/watch?v=Obn6eV3Hn_Ig https://www.youtube.com/watch?v=aywDnbvIBjs https://www.youtube.com/watch?v=d9WkOnHB63Q&list=PL0W_6qgUyIEzL5wN3-EXBx000V0bAPz1
3		**Module -3: Arrays:**Arrays(1-D,2-D),CharacterarraysandStrings,BasicAlgorithms:Searching and SortingAlgorithms(Linearsearch,Binarysearch,Bubblesort	https://www.youtube.com/watch?v=8BLWvjmPNI https://www.youtube.com/watch?v=HVHB3Y8eP8o

	29.06.2022 to 14 .07.2022	andSelectionsort). **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=_TvbaBJTBbs https://www.youtube.com/watch?v=ZbK1ebAJVA
4	15.07.2022 to 04 .08.2022	**Module -4:** UserDefinedFunctionsandRecursion. Example programs: Finding Factorial of a positive integer, GCD of two numbers and Fibonacciseqeuence. **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=09WKOvBB63Q&list=PLJSC_6qdAvBFzL9xuSJ-FX8x80BMbkPy1
5	05.08.2022 to 26 .08.2022	**Module -5** Structures, Unions and Pointers, Pre-processor Directives and Example Programs likeAdditionoftwocomplexnumbersusingstructures,computethesum,meanandstandarddeviationofallelementsstoredinanarrayofNrealnumbersusingpointers. **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=09WKOvBB63Q&list=PLJSC_6qdAvBFzL9xuSJ-FX8x80BMbkPy1

Textbooks:

1. E.Balagurusawmy,ProgramminginANSIC,7thEdition,TataMcGraw-Hill
2. BrianW.KernighanandDennisM.Ritchie,The'C' ProgrammingLanguage,PrenticeHallof India.

Reference Books:

1. ReemaThareja,ProgramminginC,Cengagepublic

WebLinksandVideoLectures(e-Resources):

1. elearning.vtu.ac.in/econtent/courses/video/BS/15PCD23.html
2. https://nptel.ac.in/courses/106/105/106105171/
3. **https://www.youtube.com/watch?v=09WKOvBB63Q&list=PLJSC_6qdAvBFzL9xuSJ-FX8x80BMbkPy1**

MOOCcoursescanbeadoptedformorclarityunderstandingthetopicsandvarietiesofproblemsolvingmethods.

ActivityBasedLearning(SuggestedActivitiesinClass)/PracticalBasedlearning

1. Realworldproblemsolvingusinggroupdiscussion.E.g.,Electricitybillgeneration etc.,
2. Demonstrationofsolutiontoaproblemthroughprogramming.
3. Demonstrationofsimpleprojectsandmotivatingthestudentstodevelopsimilarmini projects.

FACULTY

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SIET, Tumkur-06.

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TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) MICROSCHEDULE

COURSE	PROBLEM SOLVING THROUGH PROGRAMMING	STAFF NAME	DR.SUHAS G K
COURSE CODE	21PSP23/13	SEM/SEC	II
IA Marks (CIE)	50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)	Maximum Exam Marks (SEE)	50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	06/06/22	MON	Computer generations, computer types, bits, bytes and words	✓	
2	07/06/22	TUE	CPU,Primarymemory,Secondarymemory,portsandconnections	✓	
3	08/06/22	WED	inputdevices,outputdevices,Computersinanetwork	✓	
4	10/06/22	FRI	Networkhardware,Softwarebasics,softwaretypes.	✓	
5	11/06/22	SAT	BasicstructureofCprogram	✓	
6	13/06/22	MON	ExecutingaCprogram,Constant	✓	
7	14/06/22	TUE	variable and data types	✓	
8	15/06/22	WED	Operatorsandexpressions	✓	
9	17/06/22	FRI	TUTORIAL	✓	
10	18/06/22	SAT	TUTORIAL	✓	

SUMMARY

PLANNED DATE	06.06.2022	TO: 18.06.2022	
ACTUAL CLASSES TAKEN	FROM: 14-06-2022	TO: 27-06-2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 09	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

HOD/ISE
Dept. of ISE
SIET, Tumkur-06.

Dr. Narendra Viswanath
Principal

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ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	20/06/22	MON	Managing Input and output operations	✓	
12	21/06/22	TUE	Conditional Branching and Example programs	✓	
13	22/06/22	WED	finding roots of a quadratic equation	✓	
14	24/06/22	FRI	Loops.	✓	
15	25/06/22	SAT	Example programs	✓	
16	27/06/22	MON	Example programs continued	✓	
17	28/06/22	TUE	plottingofPascal's	✓	
18	29/06/22	WED	computationofbinomialcoefficients	✓	
19	1/07/22	FRI	TUTORIAL	✓	
20	2/07/22	SAT	TUTORIAL	✓	

SUMMARY

PLANNED DATE	FROM: 20.06.2022	TO: 02.07.2022	
ACTUAL CLASSES TAKEN	FROM: 20.06.22	TO: 05.07.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 08	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

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SIET, Tumkur-06.

Dr. Narendra Viswanath
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TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	4/07/22	MON	Arrays: Definition	✓	
22	5/07/22	TUE	1D-Array Declaration and Initialization	✓	
23	6/07/22	WED	Linearsearch: Algorithm and program	✓	
24	12/07/22	TUE	Binarysearch: Algorithm and program	✓	
25	13/07/22	WED	Bubblesort: Algorithm and program	✓	
26	15/07/22	FRI	Selectionsort: Algorithm and program	✓	
27	16/07/22	SAT	2D-Array Declaration and Initialization	✓	
28	18/07/22	MON	Strings Declaration: String manipulation functions	✓	
29	19/07/22	TUE	TUTORIAL	✓	
30	20/07/22	WED	TUTORIAL	✓	

SUMMARY

PLANNED DATE	FROM: 04.07.2022	TO:20.07.2022	
ACTUAL CLASSES TAKEN	FROM: 04-07-2022	TO: 20-07-2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: 01	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

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Dept. of ISE
SIET, Tumkur-06

Dr. Narendra Viswanath
Principal

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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	22/07/22	FRI	Functions: Definition And Introduction, Types	✓	
32	23/07/22	SAT	Types of User defined Functions with example	✓	
33	25/07/22	MON	Examples of user defined function :To compute factorial of given number using functions.	✓	
34	26/07/22	TUE	Examples of user defined function continued	✓	
35	27/07/22	WED	Recursive Functions: Definition with example	✓	
36	29/07/22	FRI	Example for recursive function :To compute factorial of a given number using recursive function.	✓	
37	30/07/22	SAT	Example for recursive function :To compute GCD of two positive numbers using recursive function.	✓	
38	01/08/22	MON	Fibonacciseqeence	✓	
39	02/08/22	TUE	TUTORIAL	✓	
40	03/08/22	WED	TUTORIAL	✓	

SUMMARY

PLANNED DATE	FROM: 22.07.2022	TO: 03.08.2022	
ACTUAL CLASSES TAKEN	FROM: [illegible]	TO: 03.08.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

HOD ISE

HOD
Dept. of ISE
SIET, Tumkur-05

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V			
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**
41	05/08/22	FRI	Structures: Definition and syntax with a simple example
42	12/08/22	FRI	Additionoftwocomplexnumberusingstructures
43	13/08/22	SAT	Unions: Definition and syntax with a simple example
44	16/08/22	TUE	Pointers: Definition and syntax with a simple example
45	17/08/22	WED	computethesum,meanandstandarddeviationofallelementsstoredinanarrayofNrealnumbersusingpointers
46	19/08/22	FRI	Pointers continued.....
47	20/08/22	SAT	Pointers continued.....
48	22/08/22	MON	Revision
49	23/08/22	TUE	Revision
50	24/08/22	WED	Revision

SUMMARY

PLANNED DATE	**FROM: 05.08.2022**	**TO: 24.08.2022**	
ACTUAL CLASSES TAKEN	**FROM:** ೦೬.೦೮.೨೨	**TO:** ೨೪.೦೮.೨೨	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 01	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ: 01	**SEMINARS:**	**ANY OTHER:**

Dr. Suhas G K
Staff Incharge

HOD/ISE

HOD
Dept. of ISE
SIET, Tumkur-06.

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (MAY -AUG 2022) MACROSCHEDULE

COURSE	PROBLEM SOLVING THROUGH PROGRAMMING	STAFF NAME	Dr.Suhas G K
COURSE CODE	21PSP23/13	SEM/SEC	II
IA Marks (CIE)	50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)	Maximum Exam Marks (SEE)	50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)

Course Outcomes or COs

1. Elucidate the basic architecture and functionalities of a computer and also recognizeitsvarioushardware parts.
2. Applyprogrammingconstructsof'C'languagetosolvethereal-worldproblems.
3. Explore user-defined data structures like arrays in implementing solutions toproblems like searchingandsorting.
4. Explore user-defined data structures like structures, unions and pointers inimplementingsolutions.
5. DesignandDevelopSolutionstoproblemsusingmodularprogrammingconstructsusingfunctions.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	06.06.2022 to 08.06.2022	**Module 1:**IntroductiontoComputerHardwareandSoftware:Computergenerations,computertypes,bits,bytesandwords,CPU, Primarymemory,Secondarymemory,peripheralinterfaces,inputdevices,outputdevices,Computernetwork,Networkhardware,Softwarebasics,softwaretypes. **Overviewof**C:Basicstructureof'C'program,executingCprogram,Constant,variableand datatypes,Operatorsandexpressions. **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=6VcVij_Vb4A&t=5s https://www.youtube.com/watch?v=3-uzXJK6sY8 https://www.youtube.com/watch?v=e8Hw6Fi0HlA https://www.youtube.com/watch?v=Bkn9bFXNw2Q https://www.youtube.com/watch?v=89GA1hJ6bJ0&list=PL0hfpbE6KVDLq_dpqYvDLkYsNcMY6Ok2v&index=2
2	09.06.2022 to 28.06.2022	**Module -2:**Managing Input and output operations, Conditional Branching and Loops, Example programs,findingrootsofquadraticequations,computationofbinomialcoefficients,plottingofPascal's triangle **No. of Contact Sessions:08**	https://www.youtube.com/watch?v=dVcwVCRq1xM https://www.youtube.com/watch?v=vmcvuXssRJM https://www.youtube.com/watch?v=_0S6iAJ6jI8&list=PL0hfpbE6KVDLq_dpqYvDLkYsNcMY6Ok2v&index=3
3		**Module -3: Arrays:**Arrays(1-D,2-D),Characterarraysandstrings,BasicAlgorithms:Searching and SortingAlgorithms(Linearsearch,Binarysearch,Bubblesort	https://www.youtube.com/watch?v=pmk9VzaHWg4 https://www.youtube.com/watch?v=HMtRYnz8Nx0

	29.06.2022 to 14.07.2022	andSelectionsort). **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=_1vkuB9PBo https://www.youtube.com/watch?v=ZA0_ooKyNA
4	15.07.2022 to 04.08.2022	**Module -4:** UserDefinedFunctionsandRecursion. Example programs: Finding Factorial of a positive Integer, GCD of two numbers and Fibonacciseqprence. **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=9WKGbRB6JQ&list=PLfN_8qtSvRFzL9qt5-FXBx80BMkkPy1 https://www.youtube.com/watch?v=9WKGbRB6JQ&list=PLfN_8qtSvRFzL9qt5-FXBx80BMkkPy1
5	05.08.2022 to 26.08.2022	**Module -5** Structures, Unions and Pointers, Pre-processor Directives and Example Programs likeAdditionofttwocomplexnumbersusingstructures,computethesum,meanandstandardderivationofelementsstoredinanarrayOfrealnumbersusingpointers. **No. of Contact Sessions: 08**	https://www.youtube.com/watch?v=9WKGbRB6JQ&list=PLfN_8qtSvRFzL9qt5-FXBx80BMkkPy1

Textbooks:

1. E.Balaguruswamy,ProgramminginANSIC,7thEdition,TataMcGraw-Hill
2. BrianW.Kernighan&DennisM.Ritchie,The'C' ProgrammingLanguage,PrenticeHallof India

Reference Books:

1. RennaTheraja,ProgramminginC,Cengagepublic

WeblinksandVideoLectures(e-Resources):

1. elearning.vtu.ac.in/econtent/courses/video/BS/15PCD23.html
2. https://nptel.ac.in/courses/106/105/106105171/
3. https://www.youtube.com/watch?v=9WKGbRB6JQ&list=PLfN_8qtSvRFzL9qt5-FXBx80BMkkPy1

MOOCcourses(atheadsprefthemesclarityunderstandingfulspecandiscriminativeproblemsolvingmethods)

Activity BasedLearning(SuggestedActivitiesinClass)/PracticalBasedlearning

1. Real-worldproblemsolvingusinggroupdiscussion.E.g.-Electricitybillgeneration,etc.,
2. Demonstrationofsolutionstoproblemthroughprogramming
3. Demonstrationofsimpleprojectsandmotivatingthestudentstodevelopsimilarprojects

FACULTY

HOD

HOD
Dept. of ISE
SIET, Tumkur-06.

PRINCIPAL

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) SHC HOSC SCHEDULE

COURSE	PROBLEM SOLVING THROUGH PROGRAMMING	STAFF NAME	DR.SUDHAS G K
COURSE CODE	21PSP23/13	SEM/SEC	II
IA Marks (CIE)	50 (Average of three tests for 30 marks, 10 marks for assignment and 10 marks for Quiz)	Maximum Exam Marks (SEE)	50 (Question paper will be set and evaluated for 100 marks and later reduced to 50)

MODULE I

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	06/06/22	MON	Computer generations, computer types, bits, bytes and words	✓	
2	07/06/22	TUE	CPU,Primarymemory,Secondarymemory,portsandconnections	✓	
3	08/06/22	WED	inputdevices,outputdevices,Computernetwork	✓	
4	10/06/22	FRI	Networkhardware,Softwarebasics,softwaretypes	✓	
5	11/06/22	SAT	Basicstructureof C program	✓	
6	13/06/22	MON	ExecutingaCprogram,Comment	✓	
7	14/06/22	TUE	variable and data types	✓	
8	15/06/22	WED	Operatorsandexpressions	✓	
9	17/06/22	FRI	TUTORIAL	✓	
10	18/06/22	SAT	TUTORIAL	✓	

SUMMARY

PLANNED DATE	06.06.2022	TO: 18.06.2022	
ACTUAL CLASSES TAKEN	FROM: 14.06.2022	TO: 18.06.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 08	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: 3rd
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Sudhas G K
Staff Incharge

HOD
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SIET, Tumkur-06

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	20/06/22	MON	Managing input and output operations	✓	
12	21/06/22	TUE	Conditional Branching and Example programs	✓	
13	22/06/22	WED	finding roots of a quadratic equation	✓	
14	24/06/22	FRI	Loops.	✓	
15	25/06/22	SAT	Example programs	✓	
16	27/06/22	MON	Example programs continued	✓	
17	28/06/22	TUE	plottingofPascal's	✓	
18	29/06/22	WED	computationofbinomialcoefficients	✓	
19	1/07/22	FRI	TUTORIAL	✓	
20	2/07/22	SAT	TUTORIAL	✓	

SUMMARY

PLANNED DATE	FROM: 20.06.2022	TO: 02.07.2022	
ACTUAL CLASSES TAKEN	FROM: 20.06.22	TO: 02.07.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 09	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

HOD/ISE
HOD
Dept. of ISE
SJBIT, Bangalore-60

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	4/07/22	MON	Arrays: Definition	✓	
22	5/07/22	TUE	1D-Array Declaration and Initialization	✓	
23	6/07/22	WED	Linearsearch: Algorithm and program	✓	
24	12/07/22	TUE	Binarysearch: Algorithm and program	✓	
25	13/07/22	WED	Bubblesort: Algorithm and program	✓	
26	15/07/22	FRI	Selectionsort: Algorithm and program	✓	
27	16/07/22	SAT	2D-Array Declaration and Initialization	✓	
28	18/07/22	MON	Strings Declaration: String manipulation functions	✓	
29	19/07/22	TUE	TUTORIAL	✓	
30	20/07/22	WED	TUTORIAL	✓	

SUMMARY

PLANNED DATE	FROM: 04.07.2022	TO:20.07.2022	
ACTUAL CLASSES TAKEN	FROM: 04.07.2022	TO: 20.07.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: 01	SEMINARS:	ANY OTHER:

Dr Suhas G K
Staff Incharge

HOD USE
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Dept. of ISE
SIET, Tumkur-06

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	22/07/22	FRI	Functions: Definition And Introduction, Types	✓	
32	23/07/22	SAT	Types of User defined Functions with example	✓	
33	25/07/22	MON	Examples of user defined function :To compute factorial of given number using functions.	✓	
34	26/07/22	TUE	Examples of user defined function continued	✓	
35	27/07/22	WED	Recursive Functions: Definition with example	✓	
36	29/07/22	FRI	Example for recursive function : To compute factorial of a given number using recursive function.	✓	
37	30/07/22	SAT	Example for recursive function :To compute GCD of two positive numbers using recursive function.	✓	
38	01/08/22	MON	Fibonacci sequence	✓	
39	02/08/22	TUE	TUTORIAL	✓	
40	03/08/22	WED	TUTORIAL	✓	

SUMMARY

PLANNED DATE	FROM: 22.07.2022	TO: 03.08.2022	
ACTUAL CLASSES TAKEN	FROM: [illegible]	TO: 03.08.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas S K
Staff Incharge

HOD/ISE

HOD
Dept. of ISE
SIET, Tumkur-08.

Dr. Narendra Viswanath
PRINCIPAL
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TUMKUR - 572106

MODULE V

.TE	DAY	LESSON PLANNED
8/22	FRI	Structures: Definition and syntax with a simple example
8/22	FRI	Additionoftwocomplexnumbersusingstructures
8/22	SAT	Unions: Definition and syntax with a simple example
8/22	TUE	Pointers: Definition and syntax with a simple example
8/22	WED	computethesum,meananddstandarddeviationofallelementsstoredinanarray(Nonnumbersusingpointers
8/22	FRI	Pointers continued.....
8/22	SAT	Pointers continued.....
8/22	MON	Revision
8/22	TUE	Revision.
8/22	WED	Revision.

SUMMARY

PLANNED DATE	FROM: 05.08.2022	TO: 24.08.2022	
TUAL CLASSES TAKEN	FROM: 05.8.22	TO: 24.08.22	
UMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
NTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
L ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION:
	QUIZ: 01	SEMINARS:	ANY OTHER:

Suhas G K
ff Incharge

HOD/ISE

HOD
Dept. of ISE
SIET, Tumkur-05

Dr. Narendra Viswanath
Principal

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SHRIDEVI INSTITUTE OF
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TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (DEC-AUG 2021-22)

Name of the Staff : Mr Suthan R ***Sub.Code*** : 21CPL27/17

Subject: COMPUTER PROGRAMMING LABORATORY ***Class***: I SEM, D1 Batch

Course Learning Objectives:

1. Explain problem statements and identify appropriate solutions
2. Demonstrate the use of IDE, C Compiler, and identify and rectify the syntax and syntactic errors during programming.
3. Development of algorithms and programs using constructs of C programming language
4. Reporting the observations

Sl	Date	Planned portion	Executed Portion	Remarks
01	08/01/2022	Simulation of a SimpleCalculator.	Covered	
02	15/01/2022	Compute the roots of a quadratic equation by accepting the coefficients. Print appropriate messages.	Covered	
03	22/01/2022	An electricity board charges the following rates for the use of electricity: for the first 200 units 80 paise per unit: for the next 100 units 90 paise per unit: beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged. Write a program to read the name of the user, number of units consumed and print out the charges.	Covered	
04	29/01/2022	Implement Binary Search on Integers / Names.	Covered	
05	05/02/2022	Implement Matrix multiplication and validate the rules of multiplication.	Covered	
06	12/02/2022	Compute sin(x)/cos(x) using Taylor series approximation. Compare your result with the built-in library function. Print both the results with appropriate inferences.	Covered	
07	19/02/2022	Lab Internals I	Covered	
08	26/02/2022	Sort the given set of N numbers using Bubble sort.	Covered	
09	05/03/2022	Write functions to implement string operations such as compare, concatenate, string length. Convince the parameter passing techniques.	Covered	
10	12/03/2022	Implement structures to read, write and compute average- marks and the students scoring above and below the average marks for a class of N students.	Covered	
11	12/03/2022	Develop a program using pointers to compute the sum, mean and standard deviation of all elements stored in an array of N real numbers.	Covered	Extra

12	19/03/2022	Implement Recursive functions for Binary to Decimal Conversion.	covered	
13	26/03/2022	Lab Internals II	covered	

Suthan R
Staff Incharge

Dr. C. Nagaraja
Head of the Department

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (DEC-AUG 2021-22)

Name of the Staff : Mr Suthan R ***Sub.Code*** : 21CPL27/17

Subject: COMPUTER PROGRAMMING LABORATORY ***Class***: I SEM, D2 Batch

Course Learning Objectives:

1. Explain problem statements and identify appropriate solutions
2. Demonstrate the use of IDE, C Compiler, and identify and rectify the syntax and syntactic errors during programming.
3. Development of algorithms and programs using constructs of C programming language
4. Reporting the observations

Sl	Date	Planned portion	Executed Portion	Remarks
01	05/01/2022	Simulation of a SimpleCalculator.	covered	
02	12/01/2022	Compute the roots of a quadratic equation by accepting the coefficients. Print appropriate messages.	covered	
03	19/01/2022	An electricity board charges the following rates for the use of electricity: for the first 200 units 80 paise per unit: for the next 100 units 90 paise per unit: beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged. Write a program to read the name of the user, number of units consumed and print out the charges.	covered	
04	02/02/2022	Implement Binary Search on Integers / Names.	covered	
05	09/02/2022	Implement Matrix multiplication and validate the rules of multiplication.	covered	
06	09/02/2022	Compute sin(x)/cos(x) using Taylor series approximation. Compare your result with the built-in library function. Print both the results with appropriate inferences..	covered	Extra
07	16/02/2022	Lab Internals I	covered	
08	23/02/2022	Sort the given set of N numbers using Bubble sort.	covered	
09	09/03/2022	Write functions to implement string operations such as compare, concatenate, string length. Convince the parameter passing techniques..	covered	
10	09/03/2022	Implement structures to read, write and compute average- marks and the students scoring above and below the average marks for a class of N students.	covered	Extra
11	16/03/2022	Develop a program using pointers to compute the sum, mean and standard deviation of all elements stored in an array of N real numbers..	covered	

12	23/03/2022	Implement Recursive functions for Binary to Decimal Conversion.	Covered	
13	30/03/2022	Lab Internals II	Covered	

Suthan R
Staff Incharge

Dr. C. Nagaraja
Head of the Department

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (DEC-AUG 2021-22)

Name of the Staff : Mr Suthan R *Sub.Code* : 21CPL27/17

Subject: COMPUTER PROGRAMMING LABORATORY *Class*: I SEM, D3 Batch

Course Learning Objectives:

1. Explain problem statements and identify appropriate solutions
2. Demonstrate the use of IDE, C Compiler, and identify and rectify the syntax and syntactic errors during programming.
3. Development of algorithms and programs using constructs of C programming language
4. Reporting the observations

Sl No.	Date	Planned portion	Executed Portion	Remarks
01	07/01/2022	Simulation of a SimpleCalculator.	covered	
02	14/01/2022	Compute the roots of a quadratic equation by accepting the coefficients. Print appropriate messages.	covered	
03	21/01/2022	An electricity board charges the following rates for the use of electricity: for the first 200 units 80 paise per unit: for the next 100 units 90 paise per unit: beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged. Write a program to read the name of the user, number of units consumed and print out the charges.	covered	
04	28/01/2022	Implement Binary Search on Integers / Names.	covered	
05	04/02/2022	Implement Matrix multiplication and validate the rules of multiplication.	covered	
06	11/02/2022	Compute sin(x)/cos(x) using Taylor series approximation. Compare your result with the built-in library function. Print both the results with appropriate inferences.	covered	
07	18/02/2022	Lab Internals I	covered	
08	25/02/2022	Sort the given set of N numbers using Bubble sort.	covered	
09	04/03/2022	Write functions to implement string operations such as compare, concatenate, string length. Convince the parameter passing techniques.	covered	
10	04/03/2022	Implement structures to read, write and compute average- marks and the students scoring above and below the average marks for a class of N students.	covered	Extra
11	11/03/2022	Develop a program using pointers to compute the sum, mean and standard deviation of all elements stored in an array of N real numbers.	covered	

12	12/03/2022	Implement Recursive functions for Binary to Decimal Conversion.	Covered	Extra
13	18/03/2022	Lab Internals II	Covered	

Suthan R
Staff Incharge

Dr. C. Nagaraja
Head of the Department

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SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN (OCT 2021 - FEB 2022) MACROSCHEDULE

COURSE NAME	**Data Structures and Applications**	**STAFF NAME**	**Mr. SHANMUKASWAMY CV**
COURSE CODE	**18CS32**	**SEM/SEC**	**III**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- **CO1**: Use different types of data structures, operations and algorithms
- **CO2**: Apply searching and sorting operations on files.
- **CO3**: Use stack, Queue, Lists, Trees and Graphs in problem solving
- **CO4**: Implement all data structures in a high-level language for problem solving

Sl. No.	DATE	MODULE COURSE PLAN	ADDITIONAL SOURCES
1.	18.10.2021 to 08.11.2021	**MODULE-1**: Introduction: Data Structures, Classifications (Primitive &Non Primitive), Data structure Operations, Review of Arrays, Structures, Self-Referential Structures, and Unions. Pointers and Dynamic Memory Allocation Functions. Representation of Linear Arrays in Memory, Dynamically allocated arrays. Array Operations: Traversing, inserting, deleting, searching, and sorting. Multidimensional Arrays, Polynomials and Sparse Matrices. Strings: Basic Terminology, Storing, Operations and Pattern Matching algorithms. Programming Examples.	https://www.youtube.com/watch?v=0EaWCl_4S0 https://www.youtube.com/watch?v=xTt_-UUaAZM https://www.youtube.com/watch?v=V7AZuMuIuXY [NPTEL]
2.	09.11.2021 to 02.12.2021	**Module – 2**Stacks: Definition, Stack Operations, Array Representation of Stacks, Stacks using Dynamic Arrays, Stack Applications: Polish notation, Infix to postfix conversion, evaluation of postfix expression. Recursion - Factorial, GCD, Fibonacci Sequence, Tower of Hanoi, Ackerman's function. Queues: Definition, Array Representation, Queue Operations, Circular Queues, Circular queues using Dynamic arrays, Dequeues, Priority Queues, A Mazing Problem. Multiple Stacks and Queues. Programming Examples.	https://www.youtube.com/watch?v=g1USSZVWDsY&list=PLBJCD08B895C1BF09 Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=PGWZUgzDMYI

3.	02.12.2021 to 27.12.2021	**Module** – 3Linked Lists: Definition, Representation of linked lists in Memory, Memory allocation; Garbage Collection. Linked list operations: Traversing, Searching, Insertion, and Deletion. Doubly Linked lists, Circular linked lists, and header linked lists. Linked Stacks and Queues. Applications of Linked lists – Polynomials, Sparse matrix representation. Programming Examples	https://www.youtube.com/watch?v=PGWZUgzDMY1 Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=K7VIKlUdo20 Dr PP ChakrabortyDEPT.of CSE IIT Kharagpur
4.	28.12.2021 to 25.01.2022	**Module 4:**Trees: Terminology, Binary Trees, Properties of Binary trees, Array and linked Representation of Binary Trees, Binary Tree Traversals - Inorder, postorder, preorder; Additional Binary tree operations. Threaded binary trees, Binary Search Trees – Definition, Insertion, Deletion, Traversal, Searching, Application of Trees-Evaluation of Expression, Programming Examples	https://www.youtube.com/watch?v=gVNkY_xpF6o Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=3Z6aJkS3mf8 Jayanthi Khatri Lamba
5.	27.01.2022 to 19.02.2022	**MODULE-5:**Graphs: Definitions, Terminologies, Matrix and Adjacency List Representation Of Graphs, Elementary Graph operations, Traversal methods: Breadth First Search and Depth First Search. Sorting and Searching: Insertion Sort, Radix sort, Address Calculation Sort. Hashing: Hash Table organizations, Hashing Functions, Static and Dynamic Hashing. Files and Their Organization: Data Hierarchy, File Attributes, Text Files and Binary Files, Basic File Operations, File Organizations and Indexing	https://www.youtube.com/watch?v=1n5XEEevudc&list=PLnM7aHEXEy5EnEmrg7n8YJFBnYN8.0-n8 Geeksforgeeks https://www.youtube.com/watch?v=2-k9SSZdqg Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=Md3xs0XTnlM

Textbooks:

1. Ellis Horowitz and Sartaj Sahni, Fundamentals of Data Structures in C, 2nd Ed, Universities Press,2014.
2. Seymour Lipschutz, Data Structures Schaum's Outlines, Revised 1st Ed, McGraw Hill, 2014.

Reference Books:

1. Gilberg & Forouzan, Data Structures: A Pseudo-code approach with C, 2nd Ed, Cengage Learning,2014.
2. Reema Thareja, Data Structures using C, 3rd Ed, Oxford press, 2012.
3. Jean-Paul Tremblay & Paul G. Sorenson, An Introduction to Data Structures with Applications,2nd Ed, McGraw Hill, 2013
4. A M Tenenbaum, Data Structures using C, PHI, 1989
5. Robert Kruse, Data Structures and Program Design in C, 2nd Ed, PHI, 1996

Prof. C.V.Shanmukaswamy
Staff Incharge

Prof. C.V.Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE PLAN (OCT-FEB 2022) MICROSCHEDULE

COURSE NAME	Data Structures and Applications	STAFF NAME	Mr. Shanmukaswamy CV
COURSE CODE	18CS52	SEM/SEC	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
1	18/10/21	MON	**MODULE-1**: Introduction: Data Structures,	Covered	
2	21/10/21	THU	Data structure Operations,	Covered	
3	21/10/21	THU	Review of Arrays,	Covered	
4	23/10/21	SAT	Structures, Self-Referential Structures, and Unions.	Covered	
5	25/10/21	MON	Pointers and Dynamic Memory Allocation Functions.	Covered	
6	26/10/21	TUE	Representation of Linear Arrays in Memory, Dynamically allocated arrays.	Covered	
7	28/10/21	THU	Array Operations: Traversing, inserting, deleting	Covered	
8	28/10/21	THU	searching, and sorting	Covered	
9	30/10/21	SAT	Multidimensional Arrays, Polynomials and Sparse Matrices.	Covered	
10	02/11/21	TUE	Strings: Basic Terminology, Storing, Operations	Covered	
11	04/11/21	THU	Pattern Matching algorithms, Programming Examples	Covered	
12	04/11/21	THU	Tutorial	Conducted	
13	06/11/21	SAT	Revision	Conducted	
14	08/11/21	MON	Revision	Conducted	

SUMMARY

PLANNED DATE	18.10.2021	TO: 08.11.2021	
ACTUAL CLASSES TAKEN	FROM: 18.10.2021	TO: 08/11/21	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: —	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

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TUMKUR - 572106.
Principal

MODULE II					
Sl. No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
15	09/11/21	TUE	MODULE 2Stacks: Definition, Stack Operations		
16	11/11/21	THU	Array Representation of Stacks		
17	11/11/21	THU	Tutorial		
18	13/11/21	SAT	Stacks using Dynamic Arrays		
19	15/11/21	MON	Stack Applications: Polish notation, Infix to postfix conversion		
20	16/11/21	TUE	evaluation of postfix expression.		
21	18/11/21	THU	Recursion – Factorial, GCD		
22	18/11/21	THU	Tutorial		
23	20/11/21	SAT	Fibonacci Sequence, Tower of Hanoi		
24	23/11/21	TUE	Ackerman's function. Queue Operations		
25	25/11/21	THU	Circular Queues, Circular queues using Dynamic arrays		
26	25/11/21	THU	Dequeues, Priority Queues, A Mazing Problem.		
27	27/11/21	SAT	Multiple Stacks and Queues. Programming Examples		
28	02/12/21	THU	Tutorial		

SUMMARY

PLANNED DATE	FROM: 09.11.2021	TO: 02.12.2021	
ACTUAL CLASSES TAKEN	FROM: 9/11/21	TO: 2/12/21	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1: Yes (Yes)	IA 2: Yes (Yes)	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: 02	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER:

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Narendra Viswanath
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MODULE III					
SL No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
29	02/12/21	THU	**Module 3** Linked Lists: Definition	Covered	
30	04/12/21	SAT	Representation of linked lists in Memory	Covered	
31	06/12/21	MON	Memory allocation; Garbage Collection	Covered	
32	07/12/21	TUE	Linked list operations: Traversing,	Covered	
33	09/12/21	THU	Searching, Insertion	Covered	
34	09/12/21	THU	Tutorial- Programs on insertion into SLL	Conducted	
35	13/12/21	MON	Deletion.	Covered	
36	14/12/21	TUE	Doubly Linked lists- Insertion -variations	Covered	
37	16/12/21	THU	Circular linked lists-SLL and DLL -insertion	Covered	
38	16/12/21	THU	Tutorial – Programs on Insertion into CSLL	Covered	
39	18/12/21	SAT	Circular linked lists-SLL and DLL-Deletion	Covered	
40	20/12/21	MON	Linked Stacks and Queues.	Covered	
41	21/12/21	TUE	Applications of Linked lists- Polynomials,	Covered	
42	23/12/21	THU	Sparse matrix representation	Covered	
43	23/12/21	THU	Tutorial - Programming Examples	Conducted	
44	27/12/21	MON	Revision	Conducted	

SUMMARY

PLANNED DATE	FROM: 02.12.21	TO:27.12.21	
ACTUAL CLASSES TAKEN	FROM: 2/12/21	TO: 27/12/21	
NUMBER OF CLASSES	ALLOCATED: 16	TAKEN: 16	
CONTENT COVERED FOR IA	IA 1: —	IA 2: Yes	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: 02	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER:

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
SL No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
46	28/12/21	TUE	Trees: Terminology	Covered	
47	30/12/21	THU	Binary Trees, Properties of Binary trees	Covered	
48	30/12/21	THU	Array and linked Representation of Binary Trees	Covered	
49	01/01/22	SAT	Binary Tree Traversals - Inorder,[Iterative and Recursive	Covered	
50	03/01/22	MON	postorder, preorder [Iterative and Recursive]	Covered	
51	04/01/22	TUE	Additional Binary tree operations	Covered	
52	10/01/22	MON	Threaded binary trees – Left in thread and Right in Threaded BT	Covered	
53	15/01/22	SAT	Binary Search Trees – Definition, Insertion,	Covered	
54	17/01/22	MON	Binary Search Trees – Deletion,	Covered	
55	18/01/22	TUE	Binary Search Trees – Traversal, Searching.	Covered	
56	20/01/22	THU	Application of Trees-Evaluation of Expression	Covered	
57	20/01/22	THU	Tutorial	Conducted	
58	24/01/22	MON	Programming Examples	Covered	
59	25/01/22	TUE	University QP Discussion	Conducted	

SUMMARY

PLANNED DATE	FROM: 28.12.21	TO: 25.01.22	
ACTUAL CLASSES TAKEN	FROM: 28/12/21	TO: 25/1/22	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1: —	IA 2: —	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE V					
Sl. No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
60	27/01/22	THU	**MODULE-5** Graphs: Definitions, Terminologies,	covered	
61	27/01/22	THU	Matrix and Adjacency List Representation Of Graphs	covered	
62	29/01/22	SAT	Elementary Graph operations,	covered	
63	31/01/22	MON	Traversal methods: Breadth First Search	covered	
64	01/02/22	TUE	Traversal methods : Depth First Search	covered	
65	03/02/22	THU	Sorting and Searching: Insertion Sort,	covered	
66	03/02/22	THU	Radix sort Tutorial	covered	
67	05/02/22	SAT	Address Calculation Sort	covered	
68	07/02/22	MON	Hashing: Hash Table organizations,	covered	
69	08/02/22	TUE	Hashing Functions, Static and Dynamic Hashing	covered	
70	14/02/22	MON	Files and Their Organization: Data Hierarchy, File Attributes	covered	
71	15/02/22	TUE	Text Files and Binary Files	covered	
72	17/02/22	THU	Basic File Operations File Organizations and Indexing	covered	
73	17/02/22	THU	University QP Discussion	conducted	
74	19/02/22	SAT	University QP Discussion	conducted	

SUMMARY

PLANNED DATE	**FROM: 27.01.21**	**TO: 19.2.22**	
ACTUAL CLASSES TAKEN	**FROM:** 27/1/21	**TO:** 19/2/22	
NUMBER OF CLASSES	**ALLOCATED: 15**	**TAKEN:** 15	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** —	**IA 3:** Yes
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** 0 1	**QP DISCUSSION:** Yes
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:**

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHREE INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE PLAN (OCT 2021 - FEB 2022) MACROSCHEDULE

COURSE NAME	**Data Structures and Applications**	**STAFF NAME**	**Mr. SHANMUKASWAMY CV**
COURSE CODE	**18CS32**	**SEM/SEC**	**III**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- **CO1**: Use different types of data structures, operations and algorithms
- **CO2**: Apply searching and sorting operations on files.
- **CO3**: Use stack, Queue, Lists, Trees and Graphs in problem solving
- **CO4**: Implement all data structures in a high-level language for problem solving

Sl. No.	DATE	MODULE COURSE PLAN	ADDITIONAL SOURCES
6.	18.10.2021 to 08.11.2021	**MODULE-1**: Introduction: Data Structures, Classifications (Primitive &Non Primitive), Data structure Operations, Review of Arrays, Structures, Self-Referential Structures, and Unions. Pointers and Dynamic Memory Allocation Functions. Representation of Linear Arrays in Memory, Dynamically allocated arrays. Array Operations: Traversing, inserting, deleting, searching, and sorting. Multidimensional Arrays, Polynomials and Sparse Matrices. Strings: Basic Terminology, Storing, Operations and Pattern Matching algorithms. Programming Examples.	https://www.youtube.com/watch?v=0EgWC1 4S0 https://www.youtube.com/watch?v=s7L-ULoAZM https://www.youtube.com/watch?v=V7AZuMuJnXY [NPTEL]
7.	09.11.2021 to 02.12.2021	**Module – 2**Stacks: Definition, Stack Operations, Array Representation of Stacks, Stacks using Dynamic Arrays, Stack Applications: Polish notation, Infix to postfix conversion, evaluation of postfix expression. Recursion - Factorial, GCD, Fibonacci Sequence, Tower of Hanoi, Ackerman's function. Queues: Definition, Array Representation, Queue Operations, Circular Queues, Circular queues using Dynamic arrays, Dequeues, Priority Queues, A Mazing Problem. Multiple Stacks and Queues. Programming Examples.	https://www.youtube.com/watch?v=gIUSSZVWDsY&list=PLBI3CD08B895C1BF09 Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=PGWZUgzDMYI

8.	02.12.2021 to 27.12.2021	**Module** – 3Linked Lists: Definition, Representation of linked lists in Memory, Memory allocation; Garbage Collection. Linked list operations: Traversing, Searching, Insertion, and Deletion. Doubly Linked lists, Circular linked lists, and header linked lists. Linked Stacks and Queues. Applications of Linked lists – Polynomials, Sparse matrix representation. Programming Examples	https://www.youtube.com/watch?v=PGWZUgzDMYI Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=K7VIKIUdo20 Dr PP ChakrabortyDEPT.of CSE IIT Kharagpur
9.	28.12.2021 to 25.01.2022	**Module** 4:Trees: Terminology, Binary Trees, Properties of Binary trees, Array and linked Representation of Binary Trees, Binary Tree Traversals - Inorder, postorder, preorder; Additional Binary tree operations. Threaded binary trees, Binary Search Trees – Definition, Insertion, Deletion, Traversal, Searching, Application of Trees-Evaluation of Expression, Programming Examples	https://www.youtube.com/watch?v=dYiNkV_xnEw Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=2f6qJkNxmfI Jayanthi Khatri Lamba
10.	27.01.2022 to 19.02.2022	**MODULE-5**:Graphs: Definitions, Terminologies, Matrix and Adjacency List Representation Of Graphs, Elementary Graph operations, Traversal methods: Breadth First Search and Depth First Search. Sorting and Searching: Insertion Sort, Radix sort, Address Calculation Sort. Hashing: Hash Table organizations, Hashing Functions, Static and Dynamic Hashing. Files and Their Organization: Data Hierarchy, File Attributes, Text Files and Binary Files, Basic File Operations, File Organizations and Indexing	https://www.youtube.com/watch?v=1n5XPEcxnbk&list=PLqM7uH3Y0SE4ZatrgTnBYJFBnYMLti-nh Geeksforgeeks https://www.youtube.com/watch?v=2-kHXHZbtg Dr.Naveen Garg Dept. of CSE, IIT Delhi https://www.youtube.com/watch?v=Md2r0XrdHM

Textbooks:

3. Ellis Horowitz and Sartaj Sahni, Fundamentals of Data Structures in C, 2nd Ed, Universities Press,2014.
4. Seymour Lipschutz, Data Structures Schaum's Outlines, Revised 1st Ed, McGraw Hill, 2014.

Reference Books:

6. Gilberg & Forouzan, Data Structures: A Pseudo-code approach with C, 2nd Ed, Cengage Learning,2014.
7. Reema Thareja, Data Structures using C, 3rd Ed, Oxford press, 2012.
8. Jean-Paul Tremblay & Paul G. Sorenson, An Introduction to Data Structures with Applications,2nd Ed, McGraw Hill, 2013
9. A M Tenenbaum, Data Structures using C, PHI, 1989
10. Robert Kruse, Data Structures and Program Design in C, 2nd Ed, PHI, 1996

Prof. C Y Shanmukaswamy
Staff Incharge

Prof. C Y Shanmukaswamy
HOD, CSE [I/C]

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

COURSE PLAN (OCT-FEB 2022) MICROSCHEDULE

COURSE NAME	Data Structures and Applications	STAFF NAME	Mr. Shanmukaswamy CV
COURSE CODE	18CS32	SEM/SEC	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
1	18/10/21	MON	**MODULE-I**: Introduction: Data Structures,	Covered	
2	21/10/21	THU	Data structure Operations,	Covered	
3	21/10/21	THU	Review of Arrays,	Covered	
4	23/10/21	SAT	Structures, Self-Referential Structures, and Unions.	Covered	
5	25/10/21	MON	Pointers and Dynamic Memory Allocation Functions.	Covered	
6	26/10/21	TUE	Representation of Linear Arrays in Memory, Dynamically allocated arrays.	Covered	
7	28/10/21	THU	Array Operations: Traversing, inserting, deleting	Covered	
8	28/10/21	THU	searching, and sorting	Covered	
9	30/10/21	SAT	Multidimensional Arrays, Polynomials and Sparse Matrices.	Covered	
10	02/11/21	TUE	Strings: Basic Terminology, Storing, Operations	Covered	
11	04/11/21	THU	Pattern Matching algorithms, Programming Examples	Covered	
12	04/11/21	THU	Tutorial	Covered	
13	06/11/21	SAT	Revision	Covered	
14	08/11/21	MON	Revision	Covered	

SUMMARY

PLANNED DATE	18.10.2021	TO: 08.11.2021	
ACTUAL CLASSES TAKEN	FROM: 18.10.2021	TO: 8/11/21	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 4	TUTORIALS: 01	QP DISCUSSION: ✓
	QUIZ: —	SEMINARS:	ANY OTHER:

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, ISE [I/C]

Dr. Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
15	09/11/21	TUE	MODULE 2Stacks: Definition, Stack Operations	Covered	
16	11/11/21	THU	Array Representation of Stacks	Covered	
17	11/11/21	THU	Tutorial	Conducted	
18	13/11/21	SAT	Stacks using Dynamic Arrays	Covered	
19	15/11/21	MON	Stack Applications: Polish notation, Infix to postfix conversion	Covered	
20	16/11/21	TUE	evaluation of postfix expression.	Covered	
21	18/11/21	THU	Recursion – Factorial, GCD	covered	
22	18/11/21	THU	Tutorial	Conducted	
23	20/11/21	SAT	Fibonacci Sequence, Tower of Hanoi	Covered	
24	23/11/21	TUE	Ackerman's function. Queue Operations	Covered	
25	25/11/21	THU	Circular Queues, Circular queues using Dynamic arrays	covered	
26	25/11/21	THU	Dequeues, Priority Queues, A Mazing Problem.	Covered	
27	27/11/21	SAT	Multiple Stacks and Queues. Programming Examples	covered	
28	02/12/21	THU	Tutorial	Conducted	

SUMMARY

PLANNED DATE	FROM: 09.11.2021	TO: 02.12.2021	
ACTUAL CLASSES TAKEN	FROM: 9/11/21	TO: 02/12/21	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1: Yes (Y2)	IA 2: Yes (Y2)	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: 03	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, ISE [I/C]

Dr. Narendra Viswanath
Principal

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TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
29	02/12/21	THU	**Module 3** Linked Lists: Definition	Covered	
30	04/12/21	SAT	Representation of linked lists in Memory	Covered	
31	06/12/21	MON	Memory allocation; Garbage Collection	Covered	
32	07/12/21	TUE	Linked list operations: Traversing,	covered	
33	09/12/21	THU	Searching, Insertion	Covered	
34	09/12/21	THU	Tutorial- Programs on insertion into SLL	Covered	
35	13/12/21	MON	Deletion.	Covered	
36	14/12/21	TUE	Doubly Linked lists- Insertion -variations	Covered	
37	16/12/21	THU	Circular linked lists-SLL and DLL –insertion	covered	
38	16/12/21	THU	Tutorial – Programs on Insertion into CSLL	Conducted	
39	18/12/21	SAT	Circular linked lists-SLL and DLL-Deletion	Covered	
40	20/12/21	MON	Linked Stacks and Queues.	Covered	
41	21/12/21	TUE	Applications of Linked lists- Polynomials,	Covered	
42	23/12/21	THU	Sparse matrix representation	Covered	
43	23/12/21	THU	Tutorial - Programming Examples	conducted	
44	27/12/21	MON	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 02.12.21	TO:27.12.21	
ACTUAL CLASSES TAKEN	FROM: 2/12/21	TO: 27/12/21	
NUMBER OF CLASSES	ALLOCATED: 16	TAKEN: 16	
CONTENT COVERED FOR IA	IA 1:	IA 2: Yes	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: 02	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER:

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, ISE [I/C]

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
SL No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
46	28/12/21	TUE	Trees: Terminology		
47	30/12/21	THU	Binary Trees, Properties of Binary trees		
48	30/12/21	THU	Array and linked Representation of Binary Trees		
49	01/01/22	SAT	Binary Tree Traversals - Inorder,[Iterative and Recursive		
50	03/01/22	MON	postorder, preorder [Iterative and Recursive]		
51	04/01/22	TUE	Additional Binary tree operations		
52	10/01/22	MON	Threaded binary trees – Left in thread and Right in Threaded BT		
53	15/01/22	SAT	Binary Search Trees – Definition, Insertion,		
54	17/01/22	MON	Binary Search Trees – Deletion,		
55	18/01/22	TUE	Binary Search Trees – Traversal, Searching,		
56	20/01/22	THU	Application of Trees-Evaluation of Expression		
57	20/01/22	THU	Tutorial		
58	24/01/22	MON	Programming Examples		
59	25/01/22	TUE	University QP Discussion		

SUMMARY

PLANNED DATE	FROM: 28.12.21	TO: 25.01.22	
ACTUAL CLASSES TAKEN	FROM: 28/12/21	TO: 25/1/22	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1: -	IA 2: -	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

Prof. Shivanakaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, ISE [I/C]

Dr. Sharada Shenoy
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

MODULE V					
SL No.	DATE	DAY	COURSE PLANNED	COURSE COVERED	REMARKS
60	27/01/22	THU	MODULE-5 Graphs: Definitions, Terminologies,	Covered	
61	27/01/22	THU	Matrix and Adjacency List Representation Of Graphs	Covered	
62	29/01/22	SAT	Elementary Graph operations,	Covered	
63	31/01/22	MON	Traversal methods: Breadth First Search	Covered	
64	01/02/22	TUE	Traversal methods : Depth First Search	Covered	
65	03/02/22	THU	Sorting and Searching: Insertion Sort,	Covered	
66	03/02/22	THU	Radix sort (Tutorial)	Covered	
67	05/02/22	SAT	Address Calculation Sort	Covered	
68	07/02/22	MON	Hashing: Hash Table organizations,	Covered	
69	08/02/22	TUE	Hashing Functions, Static and Dynamic Hashing	Covered	
70	14/02/22	MON	Files and Their Organization: Data Hierarchy, File Attributes	Covered	
71	15/02/22	TUE	Text Files and Binary Files	Covered	
72	17/02/22	THU	Basic File Operations File Organizations and Indexing	Covered	
73	17/02/22	THU	University QP Discussion	Covered	
74	19/02/22	SAT	University QP Discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 27.01.21	TO: 19.2.22	
ACTUAL CLASSES TAKEN	FROM: 27/01/21	TO: 19/2/22	
NUMBER OF CLASSES	ALLOCATED: 15	TAKEN: 15	
CONTENT COVERED FOR IA	IA 1: —	IA 2: —	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, ISE [I/C]

Dr. N. [illegible]
Principal

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22) MACROSCHEDULE

SUBJECT	**Analog and Digital Electronics**	**STAFF NAME**	**Dr. Charan K V**
SUBJECT CODE	**18CS33**	**SEM/SEC**	**III**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- **CO1**: Design and analyze application of analog circuits using photo devices, timer IC, power supply and regulator IC and op-amp.
- **CO2**: Explain the basic principles of A/D and D/A conversion circuits and develop the same.
- **CO3**: Simplify digital circuits using Karnaugh Map , and Quine-McCluskey Methods
- **CO4**: Explain Gates and flip flops and make us in designing different data processing circuits, registers and counters and compare the types.
- **CO5**: Develop simple HDL programs.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	19.10.2021 to 30.10.2021	**Module 2** Karnaugh maps: minimum forms of switching functions, two and three variable Karnaugh maps, four variable karnaugh maps, determination of minimum expressions using essential prime implicants, Quine-McCluskey Method: determination of prime implicants, The prime implicant chart, petricks method, simplification of incompletely specified functions, simplification using map-entered variables	https://www.youtube.com/watch?v=0IAPZzGSbME&list=PLBCNfrcb68X8qQAf63YH1G2fuzITzo_D https://www.youtube.com/watch?v=GD2NTDy5cKk&list=PLzjkTqOJuu0w6Qz50g4tnvnIghuu8CMCm# https://www.youtube.com/watch?v=tvEkvO7gEE&list=PLr-Jt8QbQs2AtdI-1Ga3WBBnnWG9WBtM7W8
2.	02.11.2021 to 19.11.2021	**Module 3** Combinational circuit design and simulation using gates: Review of Combinational circuit design, design of circuits with limited Gate Fan-in, Gate delays and Timing diagrams, Hazards in combinational Logic, simulation and testing of logic circuits Multiplexers, Decoders and Programmable Logic Devices: Multiplexers, three state buffers, decoders and encoders, Programmable Logic devices, Programmable Logic Arrays, Programmable Array Logic.	https://www.youtube.com/watch?v=2RrJvW9rvRg https://www.youtube.com/watch?v=YAE1FaYGm8A https://www.youtube.com/watch?v=PlFmI07S4hw

3.	20.11.2021 to 09.12.2021	**Module 4** Introduction to VHDL: VHDL description of combinational circuits, VHDL Models for 08 multiplexers, VHDL Modules. Latches and Flip-Flops: Set Reset Latch, Gated Latches, Edge-Triggered D Flip Flop 3.5R. Flip Flop, J K Flip Flop, T Flip Flop, Flip Flop with additional inputs, Asynchronous Sequential Circuits	https://www.youtube.com/watch?v=ARvOeuJ_-NY https://www.youtube.com/watch?v=fMOpX3g0NJI https://www.youtube.com/watch?v=GQNTOy5zKbE&list=PLrjkTqDgnn6uGQvNhuafmm2jkou8C3Cml
4.	11.12.2021 to 01.01.2022	**Module 5:** Registers and Counters: Registers and Register Transfers, Parallel Adder with accumulator, shift registers, design of Binary counters, counters for other sequences, counter design using SR and J K Flip Flops, sequential parity checker, state tables and graphs	https://www.youtube.com/watch?v=5dRGRucKU3M https://www.youtube.com/watch?v=5dRGRucKU3M&list=PLfUHvhv0rE83NKbng7acXYIeA0o1d3h https://www.youtube.com/watch?v=IVR2u9Ivx8&list=PLdo5W4Nhv31aBrJE1WS4MR9LBfmtZtAQu https://www.youtube.com/watch?v=oNBhCP9qE https://www.youtube.com/watch?v=Gc4m8Wrmf8w
5.	04.01.2022 to 19.02.2022	**MODULE-1** Photodiodes, Light Emitting Diodes and Optocouplers ,BJT Biasing :Fixed bias ,Collector to base Bias , voltage divider bias, Operational Amplifier Application Circuits: Multivibrators using IC-555, Peak Detector, Schmit trigger, Active Filters, Non-Linear Amplifier, Relaxation Oscillator, Current-to-Voltage and Voltage-to-Current Converter , Regulated Power Supply Parameters, adjustable voltage regulator ,D to A and A to D converter.	https://www.youtube.com/watch?v=DKCbsIOBNds https://www.youtube.com/watch?v=xEx_HH4B3JA https://www.youtube.com/watch?v=Lmj378gIC_g&list=PLksmnNnQpVtwQR0kAhvGAT0tnCcNBsby https://www.youtube.com/watch?v=3BBNPvv_Q6g https://www.youtube.com/watch?v=1EEP_xNbv2k https://www.youtube.com/watch?v=P&JES%gMRE https://www.youtube.com/watch?v=nLmhmf6NAcM

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukhaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22 Odd sem) MICROSCHEDULE

SUBJECT	Analog and Digital Electronics	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS33	SEM	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE II

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/10/21	TUE	Introduction	Covered	
2	21/10/21	THU	Karnaugh maps: minimum forms of switching functions, two and three variable Karnaugh maps.	Covered	
3	22/10/21	FRI	four variable karnaugh maps,	Covered	
4	23/10/21	SAT	determination of minimum expressions using essential prime implicants.	Covered	
5	26/10/21	TUE	Quine-McClusky Method: determination of prime implicants, The prime implicant chart,	Covered	
6	28/10/21	THU	petricks method,	Covered	
7	29/10/21	FRI	simplification of incompletely specified functions,	Covered	
8	30/10/21	SAT	simplification using map-entered variables	Covered	

SUMMARY

PLANNED DATE	FROM: 19/10/21	TO: 30/10/21	
ACTUAL CLASSES TAKEN	FROM: 19/10	TO: 30/10/21	
NUMBER OF CLASSES	ALLOCATED: 08	TAKEN: 08	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: NO	IA 3: NO
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C Y Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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TUMKUR - 572 106.

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
9	2/11/21	TUE	Combinational circuit design and simulation using gates:	Covered	
10	4/11/21	THU	Review of Combinational circuit design.	Covered	
11	6/11/21	SAT	design of circuits with limited Gate Fan-in ,Gate delays and Timing diagrams.	Covered	
12	9/11/21	TUE	Hazards in combinational Logic, simulation and testing of logic circuits Multiplexers.	Covered	
13	11/11/21	THU	Decoders and Programmable Logic Devices: Multiplexers.	Covered	
14	12/11/21	FRI	three state buffers,	Covered	
15	13/11/21	SAT	decoders and encoders,	Covered	
16	16/11/21	TUE	Programmable Logic devices. Programmable Logic Arrays, Programmable Array Logic.	Covered	
17	18/11/21	THU	Revision	Covered	
18	19/11/21	FRI	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 02/11/21	TO: 19/11/21	
ACTUAL CLASSES TAKEN	FROM: 8/11	TO: 18/11	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chann K V
Staff Incharge

Prof. C.V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
19	20/11/21	SAT	multiplexers,	Covered	
20	23/11/21	TUE	Revision	Covered	
21	25/11/21	THU	VHDLModules.	Covered	
22	26/11/21	FRI	Latches and Flip-Flops:	Covered	
23	27/11/21	SAT	Set Reset Latch, Gated Latches,	Covered	
24	2/12/21	TUE	Edge-Triggered D Flip Flop 3,	Covered	
25	3/12/21	WED	SR Flip Flop, J K Flip Flop, T Flip Flop,	Covered	
26	4/12/21	THU	Flip Flop with additional inputs,	Covered	
27	7/12/21	TUE	Asynchronous Sequential Circuits	Covered	
28	9/12/21	FRI	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 20/11/21	TO:9/12/21	
ACTUAL CLASSES TAKEN	FROM: 20/11/21	TO: 9/12/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: Yes	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C Y Shenthilkaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
29	11/12/21	SAT	Registers and Counters:	Covered	
30	14/12/21	TUE	Registers and Register Transfers, Parallel Adder with accumulator.	Covered	
31	16/12/21	THU	shift registers, design of Binary counters.	Covered	
32	17/12/21	FRI	counters for other sequences,	Covered	
33	18/12/21	SAT	counter design using SR and J K Flip Flops	Covered	
34	21/12/21	TUE	Revision	Covered	
35	23/12/21	THU	Revision	Covered	
36	24/12/21	FRI	sequential parity checker.	Covered	
37	28/12/21	TUE	Revision	Covered	
38	30/12/21	THU	state tables and graphs	Covered	
39	31/12/21	FRI	Revision	Covered	
40	1/1/22	SAT	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 11/12/21	TO: 01/01/22	
ACTUAL CLASSES TAKEN	FROM: 11/12/21	TO: 01/01/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2: Yes	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukhappa
HOD, CSE

Dr. Narendra Viswanath
Principal

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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE 1					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	4/1/22	TUE	Photodiodes, Light Emitting Diodes	Covered	
42	13/1/22	THU	Optocouplers ,BJT Biasing :Fixed bias ,	Covered	
43	14/1/22	FRI	Collector to base Bias , voltage divider bias, Operational Amplifier Application Circuits: Multivibrators using IC-555,	Covered	
44	15/1/22	SAT	Revision	Covered	
45	18/1/22	TUE	Revision	Covered	
46	20/1/22	THU	Peak Detector, Schmitt trigger, Active Filters, Non-Linear Amplifier,	Covered	
47	21/1/22	FRI	Revision	Covered	
48	22/1/22	SAT	Revision	Covered	
49	25/1/22	TUE	Revision	Covered	
50	27/1/22	THU	Relaxation Oscillator, Current-to-Voltage and Voltage-to-Current Converter ,	Covered	
51	28/1/22	FRI	Revision	Covered	
52	29/1/22	SAT	Revision	Covered	
53	1/2/22	TUE	Regulated Power Supply Parameters, adjustable voltage regulator ,D to A and A to D converter	Covered	
54	3/2/22	THU	Revision	Covered	
55	4/2/22	FRI	Revision	Covered	
56	8/2/22	TUE	Revision	Covered	
57	15/2/22	TUE	Revision	Covered	
58	17/2/22	THU	Revision	Covered	
59	18/2/22	FRI	Revision	Covered	
60	19/2/22	SAT	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 04/01/22	TO: 19/02/22	
ACTUAL CLASSES TAKEN	FROM: 04/01/22	TO: 19/02/22	
NUMBER OF CLASSES	ALLOCATED: 20	TAKEN: 20	
CONTENT COVERED FOR IA	IA 1:	IA 2: Yes	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2021–FEBRAURY 2022) MACROSCHEDULE

SUBJECT	Computer Organization	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	18CS34	SEM/SEC	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

Course Outcomes or COs

After studying this course, students will be able to:

CO1:Explain the basic organization of a computer system.
CO2:Demonstrate functioning of different sub systems, such as processor, Input/output,and
CO3: Memory.
CO5:Illustrate hardwired control and micro programmed control, pipelining, embedded and other computing systems.
CO4:Design and analyze simple arithmetic and logical units.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	19.10.2021 to 11.11.2021	**Module- 1** **Basic Structure of Computers**: Basic Operational Concepts, Bus Structures,Performance – Processor Clock, Basic Performance Equation,Clock Rate, Performance Measurement, **Machine Instructions and Programs**: Memory Location and Addresses, Memory Operations, Instructions and Instruction Sequencing, Addressing Modes,Assembly Language, Basic Input and Output Operations, Stacks and Queues,Subroutines,Additional Instructions, Encoding of Machine Instructions. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=WLXAAjxmuU&list=PLzxuZgq-9WXMFJn5pMvxjB43joxf4-i&index=1 https://www.youtube.com/watch?v=BXBnYkiEV2w&list=PLzxuZgq-9WXMFJn5pMvxjB43joxf4-i&index=2 https://www.youtube.com/watch?v=-VMjLIbwUM&list=PLzxuZgq-9WXMFJn5pMvxjB43joxf4-i&index=6 https://www.youtube.com/watch?v=-VMjLIbwUM&list=PLzxuZgq-9WXMFJn5pMvxjB43joxf4-i&index=6

2.	12.11.2021 to 07.12.2021	**Module -2** **Input/output Organization:** Accessing I/O Devices, Interrupts – Interrupt Hardware, Enabling and Disabling Interrupts, Handling Multiple Devices, Controlling Device Requests, Exceptions,Direct Memory Access, Buses, Interface Circuits, Standard I/O Interfaces PCI ,SCSI & USB Bus **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=aNKFCP-0g5A&list=PLeo2gpv99iXMf_ie5p9bvsjf843jnnf8-i&index=3 https://www.youtube.com/watch?v=5Xa9SB6SdeI&list=PLeo2gpv99iXMf_ie5p9bvsjf843jnnf8-i&index=9 https://www.youtube.com/watch?v=9bIGnbwIm0M&list=PLeo2gpv99iXMf_ie5p9bvsjf843jnnf8-i&index=10 https://www.youtube.com/watch?v=0Ysbc4tfwI4&list=PLeo2gpv99iXMf_ie5p9bvsjf843jnnf8-i&index=11
3.	08.12.2021 to 28.12.2021	**Module -3** **Memory System :** Basic concepts, Semiconductor RAM Memories, Read Only Memories, Speed, Size, and Cost, Cache Memories-Mapping functions, Replacement Algorithms, Performance Considerations . **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=aP346vwQ836 https://www.youtube.com/watch?v=SwvLCE-U44g https://www.youtube.com/watch?v=X1JNzla2020 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-success-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT278&dq=Application+Protocols+for+IoT+ppt&ots=g1qfsbzDCS&sig=L4rbCtF42k5LE-z_gvsf9GfsagY&redir_esc=y#v=onepage&q&f=false

4.	29.12.2021 to 20.01.2022	**Module -4** **Arithmetic**: Numbers, Arithmetic Operations and Characters , Addition and Subtraction of Signed Numbers, Design of Fast Adders, Multiplication of Positive Numbers,Signed Operand Multiplication, Fast Multiplication, Integer Division. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=LaVZ6jJ06eQ&list=PLBnzF6kLw9X7Mn0PnkaQbz0n_zRvG4kA https://www.youtube.com/watch?v=3Z5g1C8Y https://www.youtube.com/watch?v=BBM5rY11Cdw&list=PLJn9ei4Hogz0Sa5u52Jhub7kDO&index=85 https://www.slideserve.com/article/computer-arithmetic-algorithms-ppt
5.	21.01.2022 to 18.02.2022	**Module -5** **Basic Processing Unit** Some Fundamental Concepts,Execution of aComplete Instruction,Multiple Bus Organization, Hard-wired Control, Micro programmed Control, **Embedded System and Large Computer Systems:**Examples of Embedded Systems, Processor chips for embedded applications,Simple Microcontroller.The Structure of General-Purpose Multiprocessors **No. of Contact Sessions: 14**	https://www.youtube.com/watch?v=Am95W1T_Qvs&list=PLbmf2gz0WXMf_Jn5pMvxjfb43anf4-i&index=17 https://www.youtube.com/watch?v=1f90EAnJUc2w&list=PLbmf2gz0WXMf_Jn5pMvxjfb43anf4-i&index=18 https://www.youtube.com/watch?v=fBy8ok2VmAw&list=PLbmf2gz0WXMf_Jn5pMvxjfb43anf4-i&index=22 https://www.youtube.com/watch?v=7AKMERnBbQ&list=PLbmf2gz0WXMf_Jn5pMvxjfb43anf4-i&index=28

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2021 -FEBRAURY2022) MICROSCHEDULE

SUBJECT	Computer Organization	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	18CS34	SEM/SEC	III
IA Marks (CIE)	40(Average of three tests for 30marks and 10marks for assignment)	Maximum Exam Marks (SEE)	60(Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

MODULE I

ASL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/10/21	TUE	**Module 1:** **Basic Structure of Computers**: Basic OperationalConcepts, Bus Structures,	Yes	
2	21/10/21	THU	Performance – Processor Clock, Basic Performance Equation,	Yes	
3	22/10/21	FRI	Clock Rate, Performance Measurement	Yes	
4	26/10/21	TUE	**Machine Instructions and Programs**: Memory Location and Addresses	Yes	
5	27/10/21	WED	Memory Operations, Instructions and Instruction Sequencing	Yes	
6	28/10/21	THU	Addressing Modes,	Yes	
7	29/10/21	FRI	Assembly Language, Basic Input and Output Operations	Yes	
8	02/11/21	TUE	Stacks and Queues,	Yes	
9	04/11/21	THU	Subroutines,	Yes	
10	09/11/21	TUE	SubroutinesContd...	Yes	
11	10/11/21	WED	Additional InstructionsContd	Yes	
12	11/11/21	THU	Additional InstructionsContd..., Encoding of Machine Instructions	Yes	

SUMMARY

PLANNED DATE	FROM: 19.10.2021	TO:11.11.2021	
ACTUAL CLASSES TAKEN	FROM: 19/10/21	TO: 11/11/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	12/11/21	FRI	**Module 2: Input/output Organization:** Accessing I/O Devices	Yes	
14	16/11/21	TUE	Interrupts – Interrupt Hardware	Yes	
15	17/11/21	WED	Enabling and Disabling Interrupts	Yes	
16	18/11/21	THU	Handling Multiple Devices	Yes	
17	19/11/21	FRI	Controlling Device Requests, Exceptions.	Yes	
18	23/11/21	TUE	Direct Memory Access, Buses	Yes	
19	24/11/21	WED	BusesContd....	Yes	
20	25/11/21	THU	Interface Circuits	Yes	
21	26/11/21	FRI	Standard I/O Interfaces	Yes	
22	02/12/21	THU	Standard I/O InterfacesContd.,PCI &SCSI Bus	Yes	
23	03/12/21	FRI	SCSI Bus Contd., USB	Yes	
24	07/12/21	TUE	USB continued....	Yes	

SUMMARY

PLANNED DATE	FROM: 12.11.2021	TO: 07.12.2021	
ACTUAL CLASSES TAKEN	FROM: 12/11/2021	TO: 07/12/2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C. V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	08/12/21	WED	**Module 3:** **Memory System :** Basic concepts.	Yes	
26	09/12/21	THU	Semiconductor RAM Memories	Yes	
27	10/12/21	FRI	Read Only Memories, Speed, Size, and Cost	Yes	
28	14/12/21	TUE	Read Only Memories, Speed, Size, and Cost Continued....	Yes	
29	15/12/21	WED	Cache Memories-Mapping functions	Yes	
30	16/12/21	THU	Cache Memories-Mapping functions Continued....	Yes	
31	17/12/21	FRI	Cache Memories-Mapping functions Continued....	Yes	
32	21/12/21	TUE	Replacement Algorithms.	Yes	
33	22/12/21	WED	Replacement Algorithms.	Yes	
34	23/12/21	THU	Performance Considerations Continued....	Yes	
35	24/12/21	FRI	Performance Considerations Continued....	Yes	
36	28/12/21	TUE	Performance Considerations Continued....	Yes	

SUMMARY

PLANNED DATE	**FROM: 08.12.2021**	**TO:28.12.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 08/12/21	**TO:** 28/12/21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** Yes	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	29/12/21	WED	**Module 4:** **Arithmetic**: Numbers, Arithmetic Operations and Characters	Yes	
38	30/12/21	THU	Arithmetic Operations and Characters Continued…	Yes	
39	31/12/21	FRI	Addition and Subtraction of Signed Numbers	Yes	
40	04/01/22	TUE	Design of Fast Adders	Yes	
41	05/01/22	WED	Multiplication of Positive Numbers	Yes	
42	11/01/22	TUE	Signed Operand Multiplication	Yes	
43	12/01/22	WED	Fast Multiplication	Yes	
44	13/01/22	THU	Fast Multiplication Continued…	Yes	
45	18/01/22	TUE	Integer Division	Yes	
46	19/01/22	WED	Integer Division Continued…	Yes	
47	20/01/22	THU	Integer Division Continued…	Yes	

SUMMARY

PLANNED DATE	**FROM: 29.12.2021**	**TO:20.01.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 29/12/2021	**TO:** 20/1/2022	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** Yes	**IA 3:** Yes
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ: ✓	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 5

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	21/01/22	FRI	**Module 5:** **Basic Processing Unit** Some Fundamental Concepts		
49	25/01/22	TUE	Some Fundamental Concepts Continued.....		
50	27/01/22	THU	Execution of aComplete Instruction		
51	28/01/22	FRI	Multiple Bus Organization		
52	01/02/22	TUE	Multiple Bus OrganizationContd....		
53	02/02/22	WED	Hard-wired Control		
54	03/02/22	THU	Micro programmed Control		
55	04/02/22	FRI	**Embedded System and Large Computer Systems:**Examples of Embedded Systems		
56	08/02/22	TUE	Processor chips for embedded applications.		
57	09/02/22	WED	Simple Microcontroller.		
58	15/02/22	TUE	The Structure of General-Purpose Multiprocessors		
59	16/02/22	WED	REVISION		
60	17/02/22	THU	REVISION		
61	18/02/22	FRI	REVISION		

SUMMARY

PLANNED DATE	FROM: 21.01.2022	TO:18.02.2022	
ACTUAL CLASSES TAKEN	FROM: 24/1/22	TO: 18/2/22	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2022) MACROSCHEDULE

SUBJECT	Software Engineering	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS35	SEM/SEC	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Design a software system, component, or process to meet desired needs within realistic constraints
- **CO2**: Assess professional and ethical responsibility
- **CO3**: Function on multi-disciplinary teams
- **CO4**: Use the techniques, skills, and modern engineering tools necessary for engineering practice
- **CO5**: Analyze, design, implement, verify, validate, implement, apply, and maintain software systems or parts of software systems.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	19.10.2021 to 09.11.2021	**MODULE-1: Introduction**:Software Crisis, Need for Software Engineering, Professional Software Development Software Engineering Ethics, Case Studies. **Software Processes**: Models: Waterfall Model Incremental Model and Spiral Model Process activities **Requirements Engineering**: Requirements Engineering Processes Requirements Elicitation and Analysis Functional and non-functional requirements The software Requirements Document Requirements Specification, Requirements validation Requirements Management	https://www.youtube.com/watch?v=9IAPZeG59ME&list=PLBN4rrI485KqZkB03OFI-O29oiEzs_O https://www.youtube.com/watch?v=GvQNTBv5zK8&list=PLvjk1gGbaa8wGQvNhgdmm2gKoo8CXLCml https://www.youtube.com/watch?v=twE1aiO7gEE&list=PL-Je-KqQs2Atd--1Gs2WB8aaWOWRbLM7WW
2.	11.11.2021 to 04.12.2021	**Module – 2**:What is Object orientation? What is OO development? OO Themes: Evidence for usefulness of OO development: OO modelling history. Modelling as Design technique: Modelling: abstraction; The Three models. **Introduction, Modeling Concepts and Class Modeling:** What is Object orientation? What is OO development? OO ThemesEvidence for usefulness of OO development;OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. Class Modeling: Object and Class Concept, Link and associations concepts Generalization and Inheritance; A sample class model	https://www.youtube.com/watch?v=2Rr2iW9zvRg https://www.youtube.com/watch?v=YAE1FsYGotA https://www.youtube.com/watch?v=PfEmF07S4hw

3.	07.12.2021 to 25.12.2021	**System Models**:: Context models , Interaction models Structural models Behavioral models Model-driven engineering. **Design and Implementation**: Introduction to RUPDesign Principles. Object-oriented design using the UML Design patterns Implementation issues Open source development	https://www.youtube.com/watch?v=ARyQtqJ_-NY https://www.youtube.com/watch?v=IMOgX3qtNJI https://www.youtube.com/watch?v=6QfNTIbv5zK&list=PLeJkTql1jmm8wGQvNbgdmm2gkoa8CXCmI
4.	30.12.2021 to 15.01.2022	**Module 4: Software Testing**: Development testing Test-driven development Release testing . User testing Test Automation **Software Evolution**: Evolution processes Program evolution dynamics Software maintenance Legacy system management Legacy system management	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLJULHvhz0rE83NKbnq7acXYIeA0o1dXb https://www.youtube.com/watch?v=IVR2u9bxI8&list=PLdo5W4Nhv31aBrJE1WS4MIC9L8fbmZzAQs https://www.youtube.com/watch?v=uN3IrI2P9qE https://www.youtube.com/watch?v=Gc4mWmuIBvw
5.	18.01.2022 to 10.02.2022	**MODULE-5:Project Planning**: Software pricing Plan-driven development Project scheduling Estimation techniques **Quality management**: Software quality Reviews and inspections Software measurement and metrics Software standards	https://www.youtube.com/watch?v=DKCbsIDBN6c https://www.youtube.com/watch?v=xFv_HI48B3A https://www.youtube.com/watch?v=Lm37B0CaYM&list=PL8xmnXo7cVIwcQ8tWxbvGA7OfmGcNBqbv https://www.youtube.com/watch?v=3BBNPc0_Otg https://www.youtube.com/watch?v=1FEP_sNb62k https://www.youtube.com/watch?v=P8zBS8qIMRE https://www.youtube.com/watch?v=nLmhmB6NzcM

Suthan R
Staff Incharge

Prof. C V Shanmukhaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-FEB 2022) MICROSCHEDULE

SUBJECT	Software Engineering	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS35	SEM/SEC	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/10/21	TUE	**MODULE-1 Introduction:** Software Crisis.	Covered	
2	21/10/21	THU	Need for Software Engineering, Professional Software Development	Covered	
3	22/10/21	FRI	Software Engineering Ethics, Case Studies.	Covered	
4	23/10/21	SAT	**Software Processes:** Models: Waterfall Model	Covered	
5	26/10/21	TUE	Incremental Model and Spiral Model	Covered	
6	28/10/21	THU	Process activities	Covered	
7	29/10/21	FRI	**Requirements Engineering:** Requirements Engineering Processes	Covered	
8	30/10/21	SAT	Requirements Elicitation and Analysis	Covered	
9	2/11/21	TUE	Functional and non-functional requirements	Covered	
10	4/11/21	THU	The software Requirements Document	Covered	
11	6/11/21	SAT	Requirement Specification, Requirements validation	Covered	
12	9/11/21	TUE	Requirements Management	Covered	

SUMMARY

PLANNED DATE	19.10.2021	TO: 09.11.2021	
ACTUAL CLASSES TAKEN	FROM: 19.10.2021	TO: 09.11.2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C.V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	11/11/21	THU	**Module – 2:** What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development;	Covered	
14	12/11/21	FRI	OO modelling history. Modelling as Design technique:	Covered	
15	13/11/21	SAT	Modelling; abstraction; The Three models. **Introduction, Modelling Concepts and Class Modelling:**	Covered	
16	16/11/21	TUE	What is Object orientation? What is OO development? OO Themes	Covered	
17	23/11/21	TUE	Evidence for usefulness of OO development;	Covered	
18	25/11/21	THU	OO modelling history.	Covered	
19	26/11/21	FRI	Modelling as Design technique:	Covered	
20	27/11/21	SAT	Modelling; abstraction; The Three models. Class Modelling:	Covered	
21	30/11/21	TUE	Object and Class Concept; Link and associations concepts	Covered	
22	02/12/21	THU	Generalization and Inheritance;	Covered	
23	03/12/21	FRI	A sample class model	Covered	
24	04/12/21	SAT	Navigation of class models;	Covered	

SUMMARY

PLANNED DATE	FROM: 11.11.2021	TO: 04.12.2021	
ACTUAL CLASSES TAKEN	FROM: 11.11.2021	TO: 04.12.2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Rohan R
Staff Incharge

Prof. G V Shanmukaraswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	07/12/21	TUE	**System Models**: Context models , Interaction models	Covered	
26	09/12/21	THU	Structural models	Covered	
27	10/12/21	FRI	Behavioral models	Covered	
28	11/12/21	SAT	Model-driven engineering.	Covered	
29	14/12/21	TUE	**Design and Implementation**: Introduction to RUP	Covered	
30	16/12/21	THU	RUP Contin.....	Covered	
31	17/12/21	FRI	Design Principles.	Covered	
32	18/12/21	SAT	Object-oriented design using the UML	Covered	
33	21/12/21	TUE	Design patterns	Covered	
34	23/12/21	THU	Implementation issues	Covered	
35	24/12/21	FRI	Open source development	Covered	
36	25/12/21	SAT	Open source development	Covered	

SUMMARY

PLANNED DATE	FROM: 07.12.21	TO:25.12.21	
ACTUAL CLASSES TAKEN	FROM: 07.12.21	TO: 25.12.21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SIDDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572105.

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	30/12/21	THU	**Module 4: Software Testing**: Development testing,		
38	31/12/21	FRI	Test-driven development	Covered	
39	01/01/22	SAT	Release testing ,	Covered	
40	04/01/22	TUE	User testing	Covered	
41	06/01/22	THU	Test Automation	Covered	
42	07/01/22	FRI	**Software Evolution**: Evolution processes	Covered	
43	08/01/22	SAT	Program evolution dynamics	Covered	
44	11/01/22	TUE	Software maintenance	Covered	
45	13/01/22	THU	Legacy system management	Covered	
46	15/01/22	SAT	Legacy system management	Covered	

SUMMARY

PLANNED DATE	FROM: 30.12.21	TO: 15.01.22	
ACTUAL CLASSES TAKEN	FROM: 30.12.21	TO: 15.01.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓ (Oct)	IA 3: ✓ (Oct)
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Sifiun R
Staff Incharge

Prof. C. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
47	18/01/22	TUE	**MODULE-5 Project Planning**: Software pricing	Covered	
48	25/01/22	TUE	Plan-driven development	Covered	
49	27/01/22	THU	Project scheduling	Covered	
50	28/01/22	FRI	Estimation techniques	Covered	
51	29/01/22	SAT	Estimation techniques Continued....	Covered	
52	01/02/22	TUE	**Quality management**: Software quality	Covered	
53	03/02/22	THU	Reviews and inspections	Covered	
54	04/02/22	FRI	Software measurement and metrics	Covered	
55	05/02/22	SAT	Software standards	Covered	
56	08/02/22	TUE	Revision	Covered	
57	10/02/22	THU	Revision	Covered	

SUMMARY

PLANNED DATE	**FROM: 18.01.21**	**TO: 10.2.22**	
ACTUAL CLASSES TAKEN	**FROM:** 18.01.21	**TO:** 10.2.22	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Sathan R
Staff Incharge

Prof. C V Shaffiqkaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

RIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2022) MACROSCHEDULE

SUBJECT	Software Engineering	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS35	SEM/SEC	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Design a software system, component, or process to meet desired needs within realistic constraints
- **CO2**: Assess professional and ethical responsibility
- **CO3**: Function on multi-disciplinary teams
- **CO4**: Use the techniques, skills, and modern engineering tools necessary for engineering practice
- **CO5**: Analyze, design, implement, verify, validate, implement, apply, and maintain software systems or parts of software systems.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	19.10.2021 to 09.11.2021	**MODULE-1: Introduction**:Software Crisis, Need for Software Engineering, Professional Software Development Software Engineering Ethics, Case Studies. **Software Processes**: Models: Waterfall Model Incremental Model and Spiral Model Process activities **Requirements Engineering**: Requirements Engineering Processes Requirements Elicitation and Analysis Functional and non-functional requirements The software Requirements Document Requirements Specification, Requirements validation Requirements Management	https://www.youtube.com/watch?v=0IAPZzGSbME&list=PLDN4rrl48XKpZkf8NYFl-O2SsuITre_O https://www.youtube.com/watch?v=GQNT9v5vKhE&list=PLrjkTqOJsnSwGQvNhgdmm2gkuu8CXCml https://www.youtube.com/watch?v=twE1n0Y7gEE&list=PL-JvKuQv2Add--1Ga3WB8saWOWRbEMTWW
2.	11.11.2021 to 04.12.2021	**Module – 2:**What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development; OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. **Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development? OO Themes:Evidence for usefulness of OO development;OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. Class Modelling: Object and Class Concept; Link and associations concepts Generalization and Inheritance; A sample class model	https://www.youtube.com/watch?v=2Rr2tW9zvRg https://www.youtube.com/watch?v=YAE1FsYGotA https://www.youtube.com/watch?v=PfEmP07S4hw

3.	07.12.2021 to 25.12.2021	**System Models**:: Context models , Interaction models Structural models Behavioral models Model-driven engineering. **Design and Implementation**: Introduction to RUPDesign Principles. Object-oriented design using the UML Design patterns Implementation issues Open source development	https://www.youtube.com/watch?v=ARvQcqJ_-NY https://www.youtube.com/watch?v=IMOpX3q9NJI https://www.youtube.com/watch?v=GQNT0v5zKhE&list=PLrjkTql3jnm8wGQyNhgdmm2gkoa8CXCml
4.	30.12.2021 to 15.01.2022	**Module 4: Software Testing**: Development testing. Test-driven development Release testing .. User testing Test Automation **Software Evolution**: Evolution processes Program evolution dynamics Software maintenance Legacy system management Legacy system management	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLJLIlvbu0rE8JNKhnq7scXY1eA0o1dXb https://www.youtube.com/watch?v=IVR2uPlxxI8&list=PLdo5W4Nhv31a8rJE1W54MR9LRfbmZrAQu https://www.youtube.com/watch?v=uN80rfZP9gE https://www.youtube.com/watch?v=Ge4mWrmJBsw
5.	18.01.2022 to 10.02.2022	**MODULE-5 Project Planning**: Software pricing Plan-driven development Project scheduling Estimation techniques **Quality management**: Software quality Reviews and inspections Software measurement and metrics Software standards	https://www.youtube.com/watch?v=DKCbsiD8N8c https://www.youtube.com/watch?v=xFv_HI4B83A https://www.youtube.com/watch?v=Lm37Kj0CuYM&list=PL8xnmXn7pVtwvQ8tWxhvGA7O6mGcNIhhv https://www.youtube.com/watch?v=3RBNPc0_Q6g https://www.youtube.com/watch?v=1EEP_sNb6Zk https://www.youtube.com/watch?v=PfkBS9qIMRE https://www.youtube.com/watch?v=pLmhmI96NzcM

Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
RIET, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCT-FEB 2022) MICROSCHEDULE

SUBJECT	Software Engineering	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS35	SEM/SEC	III
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/10/21	TUE	**MODULE-1: Introduction**:Software Crisis,	Covered	
2	21/10/21	THU	Need for Software Engineering, Professional Software Development	Covered	
3	22/10/21	FRI	Software Engineering Ethics, Case Studies.	Covered	
4	23/10/21	SAT	**Software Processes**: Models: Waterfall Model	Covered	
5	26/10/21	TUE	Incremental Model and Spiral Model	Covered	
6	28/10/21	THU	Process activities	Covered	
7	29/10/21	FRI	**Requirements Engineering**: Requirements Engineering Processes	Covered	
8	30/10/21	SAT	Requirements Elicitation and Analysis	Covered	
9	2/11/21	TUE	Functional and non-functional requirements	Covered	
10	4/11/21	THU	The software Requirements Document	Covered	
11	6/11/21	SAT	Requirements Specification, Requirements validation	Covered	
12	9/11/21	TUE	Requirements Management	Covered	

SUMMARY

PLANNED DATE	19.10.2021	TO: 09.11.2021	
ACTUAL CLASSES TAKEN	FROM: 19.10.21	TO: 09.11.21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
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Dr Suhas G K
HOD, ISE

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MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	11/11/21	THU	**Module – 2:** What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development;	Covered	
14	12/11/21	FRI	OO modelling history. Modelling as Design technique:	Covered	
15	13/11/21	SAT	Modelling; abstraction; The Three models. **Introduction, Modelling Concepts and Class Modelling:**	Covered	
16	16/11/21	TUE	What is Object orientation? What is OO development? OO Themes	Covered	
17	23/11/21	TUE	Evidence for usefulness of OO development;	Covered	
18	25/11/21	THU	OO modelling history.	Covered	
19	26/11/21	FRI	Modelling as Design technique:	Covered	
20	27/11/21	SAT	Modelling; abstraction; The Three models. Class Modelling:	Covered	
21	30/11/21	TUE	Object and Class Concept; Link and associations concepts	Covered	
22	02/12/21	THU	Generalization and Inheritance;	Covered	
23	03/12/21	FRI	A sample class model	Covered	
24	04/12/21	SAT	Navigation of class models;	Covered	

SUMMARY

PLANNED DATE	**FROM: 11.11.2021**	**TO: 04.12.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 11.11.21	**TO:** 4.12.21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** ✓ 12	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

PRINCIPAL
Dr. Nanda Kumar
ENGINEERING COLLEGE
TUMKUR
Principal

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	07/12/21	TUE	**System Models**:: Context models , Interaction models	Covered	
26	09/12/21	THU	Structural models	Covered	
27	10/12/21	FRI	Behavioral models	Covered	
28	11/12/21	SAT	Model-driven engineering.	Covered	
29	14/12/21	TUE	**Design and Implementation**: Introduction to RUP	Covered	
30	16/12/21	THU	RUP Contin....	Covered	
31	17/12/21	FRI	Design Principles.	Covered	
32	18/12/21	SAT	Object-oriented design using the UML.	Covered	
33	21/12/21	TUE	Design patterns	Covered	
34	23/12/21	THU	Implementation issues	Covered	
35	24/12/21	FRI	Open source development	Covered	
36	25/12/21	SAT	Open source development	Covered	

SUMMARY

PLANNED DATE	**FROM: 07.12.21**	**TO:25.12.21**	
ACTUAL CLASSES TAKEN	**FROM:** 07.12.21	**TO:** 25.12.21	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	30/12/21	THU	**Module 4: Software Testing**: Development testing.	Covered	
38	31/12/21	FRI	Test-driven development	Covered	
39	01/01/22	SAT	Release testing .	Covered	
40	04/01/22	TUE	User testing	Covered	
41	06/01/22	THU	Test Automation	Covered	
42	07/01/22	FRI	**Software Evolution**: Evolution processes	Covered	
43	08/01/22	SAT	Program evolution dynamics	Covered	
44	11/01/22	TUE	Software maintenance	Covered	
45	13/01/22	THU	Legacy system management	Covered	
46	15/01/22	SAT	Legacy system management	Covered	

SUMMARY

PLANNED DATE	**FROM: 30.12.21**	**TO: 15.01.22**	
ACTUAL CLASSES TAKEN	**FROM:** 30.12.21	**TO:** 15.01.22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** 50% ✓	**IA 3:** 50% ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suthan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
DHRUVA INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
47	18/01/22	TUE	**MODULE-5:Project Planning**: Software pricing	Covered	
48	25/01/22	TUE	Plan-driven development	Covered	
49	27/01/22	THU	Project scheduling	Covered	
50	28/01/22	FRI	Estimation techniques	covered	
51	29/01/22	SAT	Estimation techniques Continued....	Covered	
52	01/02/22	TUE	**Quality management**: Software quality	Covered	
53	03/02/22	THU	Reviews and inspections	Covered	
54	04/02/22	FRI	Software measurement and metrics	Covered	
55	05/02/22	SAT	Software standards	Covered	
56	08/02/22	TUE	Revison	Covered	
57	10/02/22	THU	Revision	Covered	

SUMMARY

PLANNED DATE	**FROM: 18.01.21**	**TO: 10.2.22**	
ACTUAL CLASSES TAKEN	**FROM:** 18.01.21	**TO:** 10.2.22	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Sathan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : III (B1) Year 2021-22

Subject Title: Analog and Digital Electronics Lab	Subject Code: 18CSL37
Number of Contact Hours/Week 02 Total Number of Lab Contact Hours 36	Duration of Exam: 03 Hrs
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 18/10/2021
Checked by: Prof. Shanmuka Swamy C V	Date: 18/10/2021

Objectives:

- Analog components and circuits including Operational Amplifier, Timer, etc.
- Combinational logic circuits.
- Flip - Flops and their operations
- Counters and registers using flip-flops.
- Synchronous and Asynchronous sequential circuits.
- A/D and D/A converters

Outcomes:

- Use appropriate design equations / methods to design the given circuit.
- Examine and verify the design of both analog and digital circuits using simulators.
- Make use of electronic components, ICs, instruments and tools for design and testing of circuits for the given the appropriate inputs.
- Compile a laboratory journal which includes: aim, tool/instruments/software components used, design equations used and designs, schematics, program listing, procedure followed, relevant theory, results as graphs and tables, interpreting and concluding the findings.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	WEEK 1	Design an astable multivibrator circuit for three cases of duty cycle (50%, <50% and >50%) using NE 555 timer IC. **Simulate the same for any one duty cycle.**	Covered	
2	WEEK 2	Using an 741 Opamp, design a 1 kHz Relaxation Oscillator	Covered	

		with 50% duty cycle. And simulate the same.		
3	WEEK 3	Using ua 741 opamp, design a window comparator for any given UTP and LTP. And simulate the same.	Covered	
5	WEEK 4	IA – 1	done	
		PART – B		
6	WEEK 5	Design and implement Half adder, Full Adder, Half Subtractor, Full Subtractor using basic gates. And implement the same in HDL.	Covered	
7	WEEK 6	Given a 4-variable logic expression, simplify it using appropriate technique and realize the simplified logic expression using 8:1 multiplexer IC. And implement the same in HDL.	Covered	
8	WEEK 7	Realize a J-K Master / Slave Flip-Flop using NAND gates and verify its truth table. And implement the same in HDL.	Covered	
9	WEEK 8	Design and implement code converter i)Binary to Gray (ii) Gray to Binary Code using basic gates.	Covered	
10	WEEK 9	Design and implement a mod-n (n<8) synchronous up counter using J-K Flip-Flop ICs and demonstrate its working.	Covered	
11	WEEK 10	Design and implement an asynchronous counter using decade counter IC to count up from 0 to n (n<=9) and demonstrate on 7-segment display (using IC-7447).	Covered	
12	WEEK 11	Revision	Covered	
13	WEEK 12	Revision	Covered	
14	WEEK 13	Revision	Covered	
15	WEEK 14	IA –2	Covered	

Dr. Charan K V
Staff in charge

Prof. Siddeshwara Swamy C V
HOD- CSE

Dr. Nagendra Kumar
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : III (B2) Year 2021-22

Subject Title: Analog and Digital Electronics Lab	Subject Code: 18CSL37
Number of Contact Hours/Week 02:2 Total Number of Lab Contact Hours 36	Duration of Exam: 03 Hrs.
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 18/10/2021
Checked by: Prof. Shanmuka Swamy C V	Date: 18/10/2021

Objectives:

- Analog components and circuits including Operational Amplifier, Timer, etc.
- Combinational logic circuits.
- Flip - Flops and their operations
- Counters and registers using flip-flops.
- Synchronous and Asynchronous sequential circuits.
- A/D and D/A converters

Outcomes:

- Use appropriate design equations / methods to design the given circuit.
- Examine and verify the design of both analog and digital circuits using simulators.
- Make use of electronic components, ICs, instruments and tools for design and testing of circuits for the given the appropriate inputs.
- Compile a laboratory journal which includes: aim, tool/instruments/software/components used, design equations used and designs, schematics, program listing, procedure followed, relevant theory, results as graphs and tables, interpreting and concluding the findings.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	WEEK 1	Design an astable multivibrator circuit for three cases of duty cycle (50%, <50% and >50%) using NE 555 timer IC. Simulate the same for any one duty cycle.	Covered	
2	WEEK 2	Using an 741 Opamp, design a 1 kHz Relaxation Oscillator	Covered	

		with 50% duty cycle. And simulate the same.		
3	WEEK 3	Using an 741 opamp, design a window comparator for any given UTP and LTP. And simulate the same.	Covered	
5	WEEK 4	IA – I	done	
		PART – B		
6	WEEK 5	Design and implement Half adder, Full Adder, Half Subtractor, Full Subtractor using basic gates. And implement the same in HDL.	Covered	
7	WEEK 6	Given a 4-variable logic expression, simplify it using appropriate technique and realize the simplified logic expression using 8:1 multiplexer IC. And implement the same in HDL.	Covered	
8	WEEK 7	Realize a J-K Master / Slave Flip-Flop using NAND gates and verify its truth table. And implement the same in HDL.	Covered	
9	WEEK 8	Design and implement code converter i)Binary to Gray (ii) Gray to Binary Code using basic gates.	Covered	
10	WEEK 9	Design and implement a mod-n ($n<8$) synchronous up counter using J-K Flip-Flop ICs and demonstrate its working.	Covered	
11	WEEK 10	Design and implement an asynchronous counter using decade counter IC to count up from 0 to n ($n<=9$) and demonstrate on 7-segment display (using IC-7447).	Covered	
12	WEEK 11	Revision	Saving	
13	WEEK 12	Revision	Covered	
14	WEEK 13	Revision	Covered	
15	WEEK 14	IA –2	done	

Dr. Chetan K.V
Staff in charge

Prof. Shashanka Swamy C V
HOD-CSE

Dr. Narendra Viswanath
PRINCIPAL

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester: III (~~IV~~) Year:2021-22

Subject Title: Analog and Digital Electronics Lab	Subject Code: 18CSL37
Number of Contact Hours/Week:02 Total Number of Lab Contact Hours:36	Duration of Exam: 03 Hrs.
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K.V	Date: 18/10/2021
Checked by: Prof. Soumya Swamy C.V	Date: 18/10/2021

Objectives:

- Analog components and circuits including Operational Amplifier, Timer, etc.
- Combinational logic circuits.
- Flip - Flops and their operations
- Counters and registers using flip-flops
- Synchronous and Asynchronous sequential circuits.
- A/D and D/A converters

Outcomes:

- Use appropriate design equations / methods to design the given circuit.
- Examine and verify the design of both analog and digital circuits using simulators.
- Make use of electronic components, ICs, instruments and tools for design and testing of circuits for the given the appropriate inputs.
- Compile a laboratory journal which includes: aim, tool/instruments/software/components used, design equations used and designs, schematics, program listing, procedure followed, relevant theory, results as graphs and tables, interpreting and concluding the findings.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	WEEK 1	Design an astable multivibrator circuit for three cases of duty cycle (50%, <50% and >50%) using NE 555 timer IC. Simulate the same for any one duty cycle.	Covered	
2	WEEK 2	Using an 741 Opamp, design a 1 kHz Relaxation Oscillator.	Covered	

		with 50% duty cycle. And simulate the same		
3	WEEK 3	Using an 741 opamp, design a window comparator for any given UTP and LTP. And simulate the same	Covered	
5	WEEK 4	IA – 1	done	
		PART – B		
6	WEEK 5	Design and implement Half adder, Full Adder, Half Subtractor, Full Subtractor using basic gates. And implement the same in HDL.	Covered	
7	WEEK 6	Given a 4-variable logic expression, simplify it using appropriate technique and realize the simplified logic expression using 8:1 multiplexer IC. And implement the same in HDL.	Covered	
8	WEEK 7	Realize a J-K Master / Slave Flip-Flop using NAND gates and verify its truth table. And implement the same in HDL.	Covered	
9	WEEK 8	Design and implement code converter (i)Binary to Gray (ii) Gray to Binary Code using basic gates.	Covered	
10	WEEK 9	Design and implement a mod-n ($n<8$) synchronous up counter using J-K Flip-Flop ICs and demonstrate its working.	Covered	
11	WEEK 10	Design and implement an asynchronous counter using decade counter IC to count up from 0 to n ($n<=9$) and demonstrate on 7-segment display (using IC-7447)	Covered	
12	WEEK 11	Revision	Covered	
13	WEEK 12	Revision	done	
14	WEEK 13	Revision	done	
15	WEEK 14	IA –2	done	

Dr. Charan K V
Staff in charge

Prof. Shanmuka Swamy C V
HOD- CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2019-20 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
LABORATORY PLAN

Course Name: DATA STRUCTURES LABORATORY
Class: III Sem
Hours/Week: 03
Total Hours: 42

Course Code: 18CSL38
I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	Week 1	Revision or practice of sample programs	Covered
02	Week 2	Design, Develop and Implement a menu driven Program in C for the following array operations. a. Creating an array of N Integer Elements b. Display of array Elements with Suitable Headings c. Inserting an Element (ELEM) at a given valid Position (POS) d. Deleting an Element at a given valid Position (POS) e. Exit. Support the program with functions for each of the above operations.	Covered
03	Week 3	Design, Develop and Implement a Program in C for the following operations on Strings. a. Read a main String (STR), a Pattern String (PAT) and a Replace String (REP) b. Perform Pattern Matching Operation: Find and Replace all occurrences of PAT in STR with REP if PAT exists in STR. Report suitable messages in case PAT does not exist in STR Support the program with functions for each of the above operations. Don't use Built-in functions.	Covered
04	Week 4	Design, Develop and Implement a menu driven Program in C for the following operations on STACK of Integers (Array Implementation of Stack with maximum size MAX) a. Push an Element on to Stack b. Pop an Element from Stack c. Demonstrate how Stack can be used to check Palindrome d. Demonstrate Overflow and Underflow situations on Stack e. Display the status of Stack f. Exit Support the program with appropriate functions for each of the above operations	Covered
05	Week 5	Design, Develop and Implement a Program in C for converting an Infix Expression to Postfix Expression. Program should support for both parenthesised and free parenthesised expressions with the operators: +, -, *, /, % (Remainder), ^ (Power) and alphanumeric operands.	Covered
06	Week 6	Design, Develop and Implement a Program in C for the following Stack Applications a. Evaluation of Suffix expression with single digit operands and operators: +, -, *, /, %, ^ b. Solving Tower of Hanoi problem with n disks	Covered
07	Week 7	**INTERNALS –I**	Conducted
08	Week 8	Design, Develop and Implement a menu driven Program in C for the following operations on Circular QUEUE of Characters (Array Implementation of Queue with maximum size MAX) a. Insert an Element on to Circular QUEUE	Covered

		b. Delete an Element from Circular QUEUE c. Demonstrate Overflow and Underflow situations on Circular QUEUE d. Display the status of Cucular QUEUE e. Exit Support the program with appropriate functions for each of the above operations	
09	Week 9	Design, Develop and Implement a menu driven Program in C for the following operations on Singly Linked List (SLL) of Student Data with the fields: *USN, Name, Programme, Sem, PhNo* a. Create a SLL of N Students Data by using *front insertion* b. Display the status of SLL and count the number of nodes in it c. Perform Insertion / Deletion at End of SLL d. Perform Insertion / Deletion at Front of SLL(Demonstration of stack) e. Exit	Covered
10	Week 10	Design, Develop and Implement a menu driven Program in C for the following operations on Doubly Linked List (DLL) of Employee Data with the fields: *SSN, Name, Dept, Designation, Sal, PhNo* a. Create a DLL of N Employees Data by using *end insertion*. b. Display the status of DLL and count the number of nodes in it c. Perform Insertion and Deletion at End of DLL d. Perform Insertion and Deletion at Front of DLL e. Demonstrate how this DLL can be used as Double Ended Queue. f. Exit	Covered
11	Week 11	Design, Develop and Implement a Program in C for the following operationson Singly Circular Linked List (SCLL) with header nodes a. Represent and Evaluate a Polynomial $P(x,y,z) = 6x^2y^2z^2-4yz^3+3xy^2z+2xy+z-2xyz^3$ b. Find the sum of two polynomials POLY1(x,y,z) and POLY2(x,y,z) and store the result in POLYSUM(x,y,z) Support the program with appropriate functions for each of the above operations Design, Develop and Implement a menu driven Program in C for the following operations on Binary Search Tree (BST) of Integers a. Create a BST of N Integers: 6, 9, 5, 2, 8, 15, 24, 14, 7, 8, 5, 2 b. Traverse the BST in Inorder, Preorder and Post Order c. Search the BST for a given element (KEY) and report the appropriate message d. Exit	Covered
12	Week 12	Design, Develop and Implement a Program in C for the following operations on Graph(G) of Cities a. Create a Graph of N cities using Adjacency Matrix b. Print all the nodes reachable from a given starting node in a digraph using DFS/BFS method	Covered
13	Week 13	Given a File of N employee records with a set K of Keys (4-digit) which uniquely determine the records in file F. Assume that file F is maintained in memory by a Hash Table (HT) of m memory locations with L as the set of memory addresses (2-digit) of locations in HT. Let the keys in K and addresses in L are Integers. Design and develop a Program in C that uses Hash function H: K → L as H(K)=K mod m (remainder method), and implement hashing technique to map a given key K to the address space L. Resolve the collision (if any) using linear probing.	Covered

14	Week 14	INTERNALS –II and Revision	Conducted
15	Week 15	Final Lab Internals	Conducted

Course Instructors
[Basavesha D]

Head, Dept of CSE
[Prof.C.V Shanmukaswamy]

PRINCIPAL
BIET, TUMAKURU

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2019-20 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: DATA STRUCTURES LABORATORY
Class: III Sem A1-Batch
Hours/Week: 03
Total Hours: 42

Course Code: 18CSL38
I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	31/8/21	Revision or practice of sample programs	Covered
02	7/9/21	Design, Develop and Implement a menu driven Program in C for the following array operations. a. Creating an array of N Integer Elements b. Display of array Elements with Suitable Headings c. Inserting an Element (ELEM) at a given valid Position (POS) d. Deleting an Element at a given valid Position (POS) e. Exit. Support the program with functions for each of the above operations.	Covered
03	14/9/21	Design, Develop and Implement a Program in C for the following operations on Strings. a. Read a main String (STR), a Pattern String (PAT) and a Replace String (REP) b. Perform Pattern Matching Operation: Find and Replace all occurrences of PAT in STR with REP if PAT exists in STR. Report suitable messages in case PAT does not exist in STR Support the program with functions for each of the above operations. Don't use Built-in functions.	Covered
04	21/9/21	Design, Develop and Implement a menu driven Program in C for the following operations on STACK of Integers (Array Implementation of Stack with maximum size MAX) a. Push an Element on to Stack b. Pop an Element from Stack c. Demonstrate how Stack can be used to check Palindrome d. Demonstrate Overflow and Underflow situations on Stack e. Display the status of Stack f. Exit Support the program with appropriate functions for each of the above operations	Covered
05	28/9/21	Design, Develop and Implement a Program in C for converting an Infix Expression to Postfix Expression. Program should support for both parenthesized and free parenthesized expressions with the operators: +, -, *, /, % (Remainder), ^ (Power) and alphanumeric operands.	Covered
06	4/10/21	Design, Develop and Implement a Program in C for the following Stack Applications a. Evaluation of Suffix expression with single digit operands and operators: +, -, *, /, %, ^ b. Solving Tower of Hanoi problem with n disks	Covered
07	12/10/21	**INTERNALS – I**	Conducted
08	19/10/21	Design, Develop and Implement a menu driven Program in C for the following operations on Circular QUEUE of Characters (Array Implementation of Queue with maximum size MAX) a. Insert an Element on to Circular QUEUE	Covered

		b. Delete an Element from Circular QUEUE c. Demonstrate Overflow and Underflow situations on Circular QUEUE d. Display the status of Circular QUEUE e. Exit Support the program with appropriate functions for each of the above operations	Covered
09	26/9/21	Design, Develop and Implement a menu driven Program in C for the following operations on Singly Linked List (SLL) of Student Data with the fields: *USN, Name, Programme, Sem, PhNo* a. Create a SLL of N Students Data by using *front insertion* b. Display the status of SLL and count the number of nodes in it c. Perform Insertion / Deletion at End of SLL d. Perform Insertion / Deletion at Front of SLL(Demonstration of stack) e. Exit	Covered
10	09/10/21	Design, Develop and Implement a menu driven Program in C for the following operations on Doubly Linked List (DLL) of Employee Data with the fields: *SSN, Name, Dept, Designation, Sal, PhNo* a. Create a DLL of N Employees Data by using *end insertion* b. Display the status of DLL and count the number of nodes in it c. Perform Insertion and Deletion at End of DLL d. Perform Insertion and Deletion at Front of DLL e. Demonstrate how this DLL can be used as Double Ended Queue. f. Exit	Covered
11	23/10/21	Design, Develop and Implement a Program in C for the following operationson Singly Circular Linked List (SCLL) with header nodes a. Represent and Evaluate a Polynomial P(x,y,z) = 6x^{2}y^{2}z^2+4yz^2+3xy^{2}z+2xyz+2xy^{2}z^2 b. Find the sum of two polynomials POLY1(x,y,z) and POLY2(x,y,z) and store the result in POLYSUM(x,y,z) Support the program with appropriate functions for each of the above operations Design, Develop and Implement a menu driven Program in C for the following operations on Binary Search Tree (BST) of Integers a. Create a BST of N Integers: 6, 9, 5, 2, 8, 15, 24, 14, 7, 8, 5, 2 b. Traverse the BST in Inorder, Preorder and Post Order c. Search the BST for a given element (KEY) and report the appropriate message d. Exit	Covered
12	30/10/21	Design, Develop and Implement a Program in C for the following operations on Graph(G) of Cities a. Create a Graph of N cities using Adjacency Matrix. b. Print all the nodes reachable from a given starting node in a digraph using DFS/BFS method	Covered
13	6/11/21	Given a File of N employee records with a set K of Keys (4-digit) which uniquely determine the records in file F. Assume that file F is maintained in memory by a Hash Table (HT) of m memory locations with L as the set of memory addresses (2-digit) of locations in HT. Let the keys in K and addresses in L are Integers. Design and develop a Program in C that uses Hash function H: K → L as H(K)=K mod m (remainder method), and implement hashing technique to map a given key K to the address space L. Resolve the collision (if any) using linear probing.	Covered

14	13/11/21	INTERNALS –II and Revision	Conducted
15	20/11/21	Final Lab Internals	Conducted

Course Instructors
[Basavesha D]

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Head, Dept of CSE
[Prof.C.V.Shanmukaswamy]

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2019-20 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: DATA STRUCTURES LABORATORY
Class: III Sem A2-Batch
Hours/Week: 03
Total Hours: 42

Course Code: 18CSL38
I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	29/7/21	Revision or practice of sample programs	Covered
02	05/08/21	Design, Develop and Implement a menu driven Program in C for the following array operations. a. Creating an array of N Integer Elements b. Display of array Elements with Suitable Headings c. Inserting an Element (ELEM) at a given valid Position (POS) d. Deleting an Element at a given valid Position (POS) e. Exit. Support the program with functions for each of the above operations.	Covered
03	19/8/21	Design, Develop and Implement a Program in C for the following operations on Strings. a. Read a main String (STR), a Pattern String (PAT) and a Replace String (REP) b. Perform Pattern Matching Operation: Find and Replace all occurrences of PAT in STR with REP if PAT exists in STR. Report suitable messages in case PAT does not exist in STR Support the program with functions for each of the above operations. Don't use Built-in functions.	Covered
04	26/8/21	Design, Develop and Implement a menu driven Program in C for the following operations on STACK of Integers (Array Implementation of Stack with maximum size MAX) a. Push an Element on to Stack b. Pop an Element from Stack c. Demonstrate how Stack can be used to check Palindrome d. Demonstrate Overflow and Underflow situations on Stack e. Display the status of Stack f. Exit Support the program with appropriate functions for each of the above operations	Covered
05	9/9/21	Design, Develop and Implement a Program in C for converting an Infix Expression to Postfix Expression. Program should support for both parenthesized and free parenthesized expressions with the operators: +, -, *, /, % (Remainder), ^ (Power) and alphanumeric operands.	Covered
06	25/9/21	Design, Develop and Implement a Program in C for the following Stack Applications a. Evaluation of Suffix expression with single digit operands and operators: +, -, *, /, %, ^ b. Solving Tower of Hanoi problem with n disks	Covered
07	30/9/21	**INTERNALS – I**	Conducted
08	21/10/21	Design, Develop and Implement a menu driven Program in C for the following operations on Circular QUEUE of Characters (Array Implementation of Queue with maximum size MAX) a. Insert an Element on to Circular QUEUE	Covered

		b. Delete an Element from Circular QUEUE c. Demonstrate Overflow and Underflow situations on Circular QUEUE d. Display the status of Circular QUEUE e. Exit Support the program with appropriate functions for each of the above operations	Covered
09	28/04/21	Design, Develop and Implement a menu driven Program in C for the following operations on Singly Linked List (SLL) of Student Data with the fields: *USN, Name, Programme, Sem, PhNo* a. Create a SLL of N Students Data by using *front insertion* b. Display the status of SLL and count the number of nodes in it c. Perform Insertion / Deletion at End of SLL d. Perform Insertion / Deletion at Front of SLL(Demonstration of stack) e. Exit	Covered
10	4/05/21	Design, Develop and Implement a menu driven Program in C for the following operations on Doubly Linked List (DLL) of Employee Data with the fields: *SSN, Name, Dept, Designation, Sal, PhNo* a. Create a DLL of N Employees Data by using *end insertion* b. Display the status of DLL and count the number of nodes in it c. Perform Insertion and Deletion at End of DLL d. Perform Insertion and Deletion at Front of DLL e. Demonstrate how this DLL can be used as Double Ended Queue. f. Exit	Covered
11	11/05/21	Design, Develop and Implement a Program in C for the following operationson Singly Circular Linked List (SCLL) with header nodes a. Represent and Evaluate a Polynomial $P(x,y,z) = 6x^2y^2z^2 - 4yz^3 + 3xy^2z + 2xy^2z - 2xyz$ b. Find the sum of two polynomials POLY1(x,y,z) and POLY2(x,y,z) and store the result in POLYSUM(x,y,z) Support the program with appropriate functions for each of the above operations Design, Develop and Implement a menu driven Program in C for the following operations on Binary Search Tree (BST) of Integers a. Create a BST of N Integers: 6, 9, 5, 2, 8, 15, 24, 14, 7, 8, 5, 2 b. Traverse the BST in Inorder, Preorder and Post Order c. Search the BST for a given element (KEY) and report the appropriate message d. Exit	Covered
12	18/05/21	Design, Develop and Implement a Program in C for the following operations on Graph(G) of Cities a. Create a Graph of N cities using Adjacency Matrix. b. Print all the nodes reachable from a given starting node in a digraph using DFS/BFS method	Covered
13	25/05/21	Given a File of N employee records with a set K of Keys (4-digit) which uniquely determine the records in file F. Assume that file F is maintained in memory by a Hash Table (HT) of m memory locations with L as the set of memory addresses (2-digit) of locations in HT. Let the keys in K and addresses in L are Integers. Design and develop a Program in C that uses Hash function H: K → L as H(K)=K mod m (remainder method), and implement hashing technique to map a given key K to the address space L. Resolve the collision (if any) using linear probing.	Covered

14	25/11/21	INTERNALS –II and Revision	Conducted
15	26/11/21	Final Lab Internals	Conducted

Course Instructors
[Basavesha D]

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Head, Dept of CSE
[Prof.C.V.Shanmukaswamy]

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2019-20 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: DATA STRUCTURES LABORATORY | **Course Code: 18CSL38**
Class: III Sem A3-Batch | **I.A. Marks: 20**
Hours/Week: 03 | **Exam Hours: 03**
Total Hours: 42 | **Exam Marks: 100**

Sl no.	DATE	TOPIC	Remarks
01	21/7/21	Revision or practice of sample programs	Covered
02	5/8/21	Design, Develop and Implement a menu driven Program in C for the following array operations. a. Creating an array of N Integer Elements b. Display of array Elements with Suitable Headings c. Inserting an Element (ELEM) at a given valid Position (POS) d. Deleting an Element at a given valid Position (POS) e. Exit. Support the program with functions for each of the above operations.	Covered
03	19/8/21	Design, Develop and Implement a Program in C for the following operations on Strings. a. Read a main String (STR), a Pattern String (PAT) and a Replace String (REP) b. Perform Pattern Matching Operation: Find and Replace all occurrences of PAT in STR with REP if PAT exists in STR. Report suitable messages in case PAT does not exist in STR Support the program with functions for each of the above operations: Don't use Built-in functions.	Covered
04	24/8/21	Design, Develop and Implement a menu driven Program in C for the following operations on STACK of Integers (Array Implementation of Stack with maximum size MAX) a. Push an Element on to Stack b. Pop an Element from Stack c. Demonstrate how Stack can be used to check Palindrome d. Demonstrate Overflow and Underflow situations on Stack e. Display the status of Stack f. Exit Support the program with appropriate functions for each of the above operations	Covered
05	9/9/21	Design, Develop and Implement a Program in C for converting an Infix Expression to Postfix Expression. Program should support for both parenthesized and free parenthesized expressions with the operators: +, -, *, /, % (Remainder), ^ (Power) and alphanumeric operands.	Covered
06	16/9/21	Design, Develop and Implement a Program in C for the following Stack Applications a. Evaluation of Suffix expression with single digit operands and operators: +, -, *, /, %, ^ b. Solving Tower of Hanoi problem with n disks	Covered
07	23/9/21	**INTERNALS –I**	Conducted
08	30/9/21	Design, Develop and Implement a menu driven Program in C for the following operations on Circular QUEUE of Characters (Array Implementation of Queue with maximum size MAX) a. Insert an Element on to Circular QUEUE	Covered

		b. Delete an Element from Circular QUEUE c. Demonstrate Overflow and Underflow situations on Circular QUEUE d. Display the status of Circular QUEUE e. Exit Support the program with appropriate functions for each of the above operations	
09	8|10|21	Design, Develop and Implement a menu driven Program in C for the following operations on Singly Linked List (SLL) of Student Data with the fields: *USN, Name, Programme, Sem, PhNo* a. Create a SLL of N Students Data by using *front insertion* b. Display the status of SLL and count the number of nodes in it c. Perform Insertion / Deletion at End of SLL d. Perform Insertion / Deletion at Front of SLL(Demonstration of stack) e. Exit	Covered
10	29|10|21	Design, Develop and Implement a menu driven Program in C for the following operations on Doubly Linked List (DLL) of Employee Data with the fields: *SSN, Name, Dept, Designation, Sal, PhNo* a. Create a DLL of N Employees Data by using *end insertion* b. Display the status of DLL and count the number of nodes in it c. Perform Insertion and Deletion at End of DLL d. Perform Insertion and Deletion at Front of DLL e. Demonstrate how this DLL can be used as Double Ended Queue. f. Exit	Covered
11	4|11|21	Design, Develop and Implement a Program in C for the following operationson Singly Circular Linked List (SCLL) with header nodes a. Represent and Evaluate a Polynomial $P(x,y,z) = 6x^2y^2z^2-4yz^3+3xy^2+2xy+a-2xyz$ b. Find the sum of two polynomials POLY1(x,y,z) and POLY2(x,y,z) and store the result in POLYSUM(x,y,z) Support the program with appropriate functions for each of the above operations Design, Develop and Implement a menu driven Program in C for the following operations on Binary Search Tree (BST) of Integers a. Create a BST of N Integers: 6, 9, 5, 2, 8, 15, 24, 14, 7, 8, 5, 2 b. Traverse the BST in Inorder, Preorder and Post Order c. Search the BST for a given element (KEY) and report the appropriate message d. Exit	Covered
12	11|11|21	Design, Develop and Implement a Program in C for the following operations on Graph(G) of Cities a. Create a Graph of N cities using Adjacency Matrix. b. Print all the nodes reachable from a given starting node in a digraph using DFS/BFS method	Covered
13	18|11|21	Given a File of N employee records with a set K of Keys (4-digit) which uniquely determine the records in file F. Assume that file F is maintained in memory by a Hash Table (HT) of m memory locations with L as the set of memory addresses (2-digit) of locations in HT. Let the keys in K and addresses in L are Integers. Design and develop a Program in C that uses Hash function H: K → L as H(K)=K mod m (remainder method), and implement hashing technique to map a given key K to the address space L. Resolve the collision (if any) using linear probing.	Covered

14	25	11	21	INTERNALS –II and Revision	Conducted
15	25	11	21	Final Lab Internals	Conducted

Course Instructors
[Basavesha D]

Head, Dept of CSE
[Prof.C.V.Shanmukaswamy]

PRINCIPAL
SIET, TUMAKURU.

OPERATING SYSTEMS
(Effective from the academic year 2018 -2019)
SEMESTER – IV

Course Code	**18CS43**	**CIE Marks**	40
Number of Contact Hours/Week	3:0:0	**SEE Marks**	60
Total Number of Contact Hours	40	**Exam Hours**	03

CREDITS – 3

Course Learning Objectives: This course (18CS43) will enable students to:

- Introduce concepts and terminology used in OS
- Explain threading and multithreaded systems
- Illustrate process synchronization and concept of Deadlock
- Introduce Memory and Virtual memory management, File system and storage techniques

Module 1	**Contact Hours**
Introduction to operating systems, System structures: What operating systems do; Computer System organization; Computer System architecture; Operating System structure; Operating System operations; Process management; Memory management; Storage management; Protection and Security; Distributed system; Special-purpose systems; Computing environments. **Operating System Services:** User - Operating System interface; System calls; Types of system calls; System programs; Operating system design and implementation; Operating System structure; Virtual machines; Operating System generation; System boot. **Process Management** Process concept; Process scheduling; Operations on processes; Inter process communication **Text book 1: Chapter 1, 2.1, 2.3, 2.4, 2.5, 2.6, 2.8, 2.9, 2.10, 3.1, 3.2, 3.3, 3.4** **RBT: L1, L2, L3**	08
Module 2	
Multi-threaded Programming: Overview; Multithreading models; Thread Libraries; Threading issues. Process Scheduling: Basic concepts; Scheduling Criteria; Scheduling Algorithms; Multiple-processor scheduling; Thread scheduling. **Process Synchronization:** Synchronization: The critical section problem; Peterson's solution; Synchronization hardware; Semaphores; Classical problems of synchronization; Monitors. **Text book 1: Chapter 4.1, 4.2, 4.3, 4.4, 5.1, 5.2, 5.3, 5.4, 5.5, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7** **RBT: L1, L2, L3**	08
Module 3	
Deadlocks : Deadlocks; System model; Deadlock characterization; Methods for handling deadlocks; Deadlock prevention; Deadlock avoidance; Deadlock detection and recovery from deadlock. **Memory Management:** Memory management strategies: Background; Swapping; Contiguous memory allocation; Paging; Structure of page table; Segmentation. **Text book 1: Chapter 7, 8.1 to 8.6** **RBT: L1, L2, L3**	08
Module 4	
Virtual Memory Management: Background; Demand paging; Copy-on-write; Page replacement; Allocation of frames; Thrashing. **File System, Implementation of File System**: File system: File concept; Access methods; Directory structure; File system mounting; File sharing; Protection: Implementing File system: File system structure; File system implementation; Directory implementation; Allocation methods; Free space management. **Text book 1: Chapter 91. To 9.6, 10.1 to 10.5** **RBT: L1, L2, L3**	08

Module 5	
Secondary Storage Structures, Protection: Mass storage structures; Disk structure; Disk attachment; Disk scheduling; Disk management; Swap space management. Protection: Goals of protection, Principles of protection, Domain of protection, Access matrix, Implementation of access matrix, Access control, Revocation of access rights, Capability- Based systems. **Case Study: The Linux Operating System:** Linux history; Design principles; Kernel modules; Process management; Scheduling; Memory Management; File systems, Input and output; Inter-process communication. **Text book 1: Chapter 12.1 to 12.6, 21.1 to 21.9** **RBT: L1, L2, L3**	08

Course Outcomes: The student will be able to :

- Demonstrate need for OS and different types of OS
- Apply suitable techniques for management of different resources
- Use processor, memory, storage and file system commands
- Realize the different concepts of OS in platform of usage through case studies

Question Paper Pattern:

- The question paper will have ten questions.
- Each full Question consisting of 20 marks
- There will be 2 full questions (with a maximum of four sub questions) from each module.
- Each full question will have sub questions covering all the topics under a module.
- The students will have to answer 5 full questions, selecting one full question from each module.

Textbooks:

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Principles 7th edition, Wiley-India, 2006

Reference Books:

1. Ann McHoes Ida M Flynn, Understanding Operating System, Cengage Learning, 6th Edition
2. D.M Dhamdhere, Operating Systems: A Concept Based Approach 3rd Ed, McGraw- Hill, 2013.
3. P.C.P. Bhatt, An Introduction to Operating Systems: Concepts and Practice 4th Edition, PHI(EEE), 2014.
4. William Stallings Operating Systems: Internals and Design Principles, 6th Edition, Pearson.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2022) MACROSCHEDULE

SUBJECT	Operating System	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS43	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Demonstrate need for OS and different types of OS
- Discuss suitable techniques for management of different resources
- Illustrate processor, memory, storage and file system commands
- Explain the different concepts of OS in platform of usage through case studies

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	23.05.2022 to 04.06.2022	**Module- 1: Introduction to operating systems, System structures** What operating systems do; Computer System organization; Computer System architecture; Operating System structure; Operating System operations; Process management; Memorymanagement; Storage management; Protection and Security; Distributed system; Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface; System calls; Types of system calls; System programs; Operating system design and implementation; Operating System structure; Virtual machines; Operating System generation; System boot. **ProcessManagement** Process concept; Process scheduling; Operations on processes;Inter process communication **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=RnuuWx1TIM https://www.youtube.com/watch?v=eEjsBoiIbwo&list=PLzjkJ1aUjuux7L1SP3xPJ9O5QiBkNkCwBFx https://www.youtube.com/watch?v=2AMK2Wx8td4 https://www.youtube.com/watch?v=89Pa-eG2s8k https://www.youtube.com/watch?v=6nL-nA89XK4
2	6.06.2022 to 17.06.2022	**Module -2 Multi-threaded Programming** Overview; Multithreading models; Thread Libraries; Threading issues. Process Scheduling: Basic concepts; Scheduling Criteria; Scheduling Algorithms; Multiple-processor scheduling; Thread scheduling. **Process Synchronization:** Synchronization; The critical section problem; Peterson's solution; Synchronization hardware; Semaphores; Classical problems of synchronization; Monitors **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=2KCVJ6rSVb https://www.youtube.com/watch?v=vMVNJ6GbrUA&list=PLIY8eNdw5tW_IBb0sdrEAIESiRcnaB3yk https://www.youtube.com/watch?v=n0YYCbvZFz

3	18.06.2022 to 29.06.2022	**Module -3: Deadlocks** Deadlocks; System model; Deadlock characterization; Methods for handling deadlocks; Deadlock prevention; Deadlock avoidance; Deadlock detection and recovery from deadlock. **Memory Management:** Memory management strategies: Background; Swapping; Contiguous memory allocation; Paging; Structure of page table; Segmentation. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?search_query=Deadlocks%3A+System+model https://www.youtube.com/watch?v=FVaw9Z5Qaf8 https://www.youtube.com/watch?search_query=Memory+management+strategies%3A+Background%3B+Swapping%3B+Contiguous+memory+allocation%3B+Paging%3B+Structure+of+page+table%3B+Segmentation
4	30.06.2022 to 11.07.2022	**Module -4** **Virtual Memory Management**: Background; Demand paging; Copy-on-write; Page replacement; Allocation of frames; Thrashing. **File System, Implementation of File System:** File system: File concept; Access methods; Directory structure; File system mounting; File sharing; Protection: Implementing File system: File system structure; File system implementation; Directory implementation; Allocation methods; Free space management. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=5PbwJi3Zi0I https://www.youtube.com/watch?v=9Eg_1vzfm8Q https://www.youtube.com/watch?v=n8iFYvuSg5s https://www.youtube.com/watch?v=PBwAcQG8wig&list=PLzMcbGfZ4dp3OvsLGK_HqXwylB1GwCTLI
5	12.07.2022 to 22.07.2022	**Module -5** **Secondary Storage Structures, Protection:** Mass storage structures; Disk structure; Disk attachment; Disk scheduling; Disk management; Swap space management. Protection: Goals of protection, Principles of protection, Domain of protection, Access matrix, Implementation of access matrix, Access control, Revocation of access rights, Capability- Based systems. **Case Study: The LinuxOperating System:** Linux history; Design principles; Kernel modules; Process management; Scheduling; Memory Management; File systems, Input and output; Inter-process communication. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=YcW05MzHtw8 https://www.youtube.com/watch?v=Jq0Bz8Yy0M8 https://www.youtube.com/watch?v=pJq6ObVJX1k https://www.youtube.com/watch?v=GORjcwf0Lgk

TEXT BOOKS:

1. Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Operating System Principles 7edition, Wiley-India, 2006

REFERENCE BOOKS:

1. Ann McHoes Ida M Flynn, Understanding Operating System, Cengage Learning, 6thEdition
2. D.M Dhamdhere, Operating Systems: A Concept Based Approach 3rd Ed, McGraw- Hill, 2013.
3. P.C.P. Bhatt, An Introduction to Operating Systems: Concepts and Practice 4th Edition, PHI(EEE), 2014.
4. William Stallings Operating Systems: Internals and Design Principles, 6th Edition, Pearson.

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (FEB -JUNE 2022) MICROSCHEDULE

SUBJECT	OPERATING SYSTEM	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS43	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Sl. No.	DATE	LESSON PLANNED	LESSON COVERED	REMARKS
1	23/05/22	**Introduction to OS, System structures:** What operating systems Does	Covered	
2	24/05/22	Computer System architecture; Operating System structure; Operating System operations; Process management.	Covered	
3	25/05/22	Memory management; Storage management; Protection and security; Distributed system.	Covered	
4	27/05/22	Special-purpose systems; Computing environments. Operating System Services; User - Operating System interface.	Covered	
5	28/05/22	System calls; Types of system calls; System programs.	Covered	
6	30/05/22	Operating System design and implementation.	Covered	
7	31/05/22	Operating System structure.	Covered	
8	01/06/22	Virtual machines; Operating system generation; System boot.	Covered	
9	03/06/22	**Process Management** Process concept; Process scheduling	Covered	
10	04/06/22	Operations on processes; Inter process communication	Covered	

SUMMARY

PLANNED DATE	FROM: 23.05.2022	TO: 04.06.2022	
ACTUAL CLASSES TAKEN	FROM: 23/5/22	TO: 4/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V Shamlikeswamy
HOD, CSE

Dr. Na[illegible]
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

		MODULE II		
Sl. No.	DATE	LESSON PLANNED	LESSON COVERED	REMARKS
11	06/06/22	**Multi-threaded Programming** Multi-Threaded Programming: Overview	Covered	
12	07/06/22	Multithreading models.	Covered	
13	08/06/22	Thread Libraries; threading issues.	Covered	
14	09/06/22	Process Scheduling: Basic concepts; Scheduling criteria.	Covered	
15	10/06/22	Scheduling algorithms.	Covered	
16	11/06/22	Multiple-Processor scheduling; Thread scheduling.	Covered	
17	13/06/22	**Process Synchronization:** Synchronization basic concepts.	Covered	
18	14/06/22	Critical section problem. Peterson's solution. Synchronization hardware	Covered	
19	16/06/22	Semaphores.	Covered	
20	17/06/22	Monitors.	Covered	

SUMMARY

PLANNED DATE	**FROM:** [illegible]	**TO:** [illegible]	
ACTUAL CLASSES TAKEN	**FROM:** 6/6/22	**TO:** 17/6/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/06/22	FRI	**DEADLOCKS:** System model; Deadlock characterization		
22	20/06/22	SAT	Methods for handling deadlocks.	Covered	
23	21/06/22	TUE	Deadlock prevention.	Covered	
24	22/06/22	THU	Deadlock avoidance.	Covered	
25	23/06/22	FRI	Deadlock detection and recovery from deadlock.	Covered	
26	24/06/22	SAT	Deadlocks continued.	Covered	
27	25/06/22	TUE	**Memory Management:** Memory management strategies: Background; Swapping;	Covered	
28	27/06/22	THU	Contiguous memory allocation; Paging;	Covered	
29	28/06/22	FRI	Structure of page table;	Covered	
30	29/06/22	SAT	Segmentation	Covered	

SUMMARY

PLANNED DATE	FROM: 4.06.2022	TO:19.06.2022	
ACTUAL CLASSES TAKEN	FROM: 18/6/22	TO: 29/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	30/06/22	FRI	**Virtual Memory Management**: Background.	Covered	
32	01/07/22	SAT	Demand paging.	Covered	
33	02/07/22	TUE	Copy-on-write; Page replacement.	Covered	
34	04/07/22	THU	Allocation of threads and thrashing.	Covered	
35	05/07/22	FRI	Implementing File System: File system structure.	Covered	
36	06/07/22	SAT	File system implementation; Directory implementation.	Covered	
37	07/07/22	TUE	Allocation methods.	Covered	
38	08/07/22	THU	Allocation methods Contd…	Covered	
39	09/07/22	FRI	Free space management	Covered	
40	11/07/22	SAT	Free space management Contd…	Covered	

SUMMARY

PLANNED DATE	FROM: 25.06.2022	TO: 10.07.2022	
ACTUAL CLASSES TAKEN	FROM: 30/6/22	TO: 11/7/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V Sharmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Tumakuru - 572 106.

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
41	12/07/22	FRI	**Secondary Storage Structures, Protection:** Mass Storage structures; Disk structure.	Covered	
42	13/07/22	SAT	Disk attachment; Disk scheduling.	Covered	
43	14/07/22	TUE	Swap space management.	Covered	
44	15/07/22	THU	Protection: Goals of protection.	Covered	
45	16/07/22	FRI	Principles of protection, Domain of protection, Access matrix.	Covered	
46	18/07/22	SAT	Domain of protection, Access matrix.	covered	
47	19/07/22	TUE	Implementation of access matrix.	Covered	
48	20/07/22	THU	Access matrix Continued	Covered	
49	21/07/22	FRI	Access control.	Covered	
50	22/07/22	SAT	Revocation of access rights. Capability-Based systems.	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.07.2022**	**TO: 31.07.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 16/7/22	**TO:** 22/7/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	IA 3: ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	QP DISCUSSION: ✓
	QUIZ:	**SEMINARS:**	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (FEB - JUNE 2022) MICRO SCHEDULE

SUBJECT	**OPERATING SYSTEM**	**STAFF NAME**	**KIRAN G M**
SUBJECT CODE	**18CS43**	**SEM/SEC**	**IV**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	23/05/22	TUE	**Introduction to OS, System structures:** What operating systems Does	Covered	
2	24/05/22	THU	Computer System architecture; Operating System structure; Operating System operations; Process management.	Covered	
3	25/05/22	FRI	Memory management; Storage management; Protection and security; Distributed system.	Covered	
4	27/05/22	SAT	Special-purpose systems; Computing environments. Operating System Services; User – Operating System interface.	Covered	
5	28/05/22	TUE	System calls; Types of system calls; System programs.	Covered	
6	30/05/22	THU	Operating System design and implementation.	Covered	
7	31/05/22	FRI	Operating System structure.	Covered	
8	01/06/22	TUE	Virtual machines; Operating system generation; System boot.	Covered	
9	03/06/22	THU	**Process Management** Process concept; Process scheduling	Covered	
10	04/06/22	FRI	Operations on processes; Inter process communication	Covered	

SUMMARY

PLANNED DATE	**FROM: 23.05.2022**	**TO: 04.06.2022**	
ACTUAL CLASSES TAKEN	**FROM: 23.05.2022**	**TO: 04.06.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. [illegible]
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	06/06/22	THU	**Multi-threaded Programming**: Multi-Threaded Programming: Overview.	Covered	
12	07/06/22	SAT	Multithreading models.	Covered	
13	08/06/22	TUE	Thread Libraries, threading issues.	Covered	
14	09/06/22	THU	Process Scheduling: Basic concepts: Scheduling criteria.	Covered	
15	10/06/22	FRI	Scheduling algorithms.	Covered	
16	11/06/22	SAT	Multiple-Processor scheduling, Thread scheduling.	Covered	
17	13/06/22	TUE	**Process Synchronization:** Synchronization basic concepts.	Covered	
18	14/06/22	THU	Critical section problem. Peterson's solution. Synchronization hardware.	Covered	
19	16/06/22	FRI	Semaphores.	Covered	
20	17/06/22	SAT	Monitors.	Covered	

SUMMARY

PLANNED DATE	**FROM: 06.06.22**	**TO: 17.06.22**	
ACTUAL CLASSES TAKEN	**FROM: 06.06.2022**	**TO: 17.06.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMAKURU-572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/06/22	FRI	**DEADLOCKS**: System model; Deadlock characterization	Covered	
22	20/06/22	SAT	Methods for handling deadlocks.	Covered	
23	21/06/22	TUE	Deadlock prevention.	Covered	
24	22/06/22	THU	Deadlock avoidance.	Covered	
25	23/06/22	FRI	Deadlock detection and recovery from deadlock.	Covered	
26	24/06/22	SAT	Deadlocks continued.	Covered	
27	25/06/22	TUE	**Memory Management:** Memory management strategies: Background; Swapping.	Covered	
28	27/06/22	THU	Contiguous memory allocation; Paging;	Covered	
29	28/06/22	FRI	Structure of page table;	Covered	
30	29/06/22	SAT	Segmentation	Covered	

SUMMARY

PLANNED DATE	**FROM: 18.06.2022**	**TO:29.06.2022**	
ACTUAL CLASSES TAKEN	**FROM: 10**	**TO: 10**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ: ✓	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SAHYADRI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	30/06/22	FRI	**Virtual Memory Management**: Background.	Covered	
32	01/07/22	SAT	Demand paging.	Covered	
33	02/07/22	TUE	Copy-on-write, Page replacement.	Covered	
34	04/07/22	THU	Allocation of threads and thrashing.	Covered	
35	05/07/22	FRI	Implementing File System: File system structure.	Covered	
36	06/07/22	SAT	File system implementation; Directory implementation.	Covered	
37	07/07/22	TUE	Allocation methods.	Covered	
38	08/07/22	THU	Allocation methods Contd…	Covered	
39	09/07/22	FRI	Free space management	Covered	
40	11/07/22	SAT	Free space management Contd…	Covered	

SUMMARY

PLANNED DATE	**FROM: 30.06.2021**	**TO: 11.07.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 30/6/21	**TO:** 11/7/21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
41	12/07/22	FRI	**Secondary Storage Structures, Protection:** Mass Storage structures; Disk structure.	Covered	
42	13/07/22	SAT	Disk attachment; Disk scheduling.	Covered	
43	14/07/22	TUE	Swap space management.	Covered	
44	15/07/22	THU	Protection: Goals of protection.	Covered	
45	16/07/22	FRI	Principles of protection, Domain of protection, Access matrix.	Covered	
46	18/07/22	SAT	Domain of protection, Access matrix.	Covered	
47	19/07/22	TUE	Implementation of access matrix.	Covered	
48	20/07/22	THU	Access matrix Continued	Covered	
49	21/07/22	FRI	Access control.	Covered	
50	22/07/22	SAT	Revocation of access rights. Capability-Based systems.	Covered	

SUMMARY

PLANNED DATE	**FROM: 12.07.2022**	**TO: 22.07.2022**	
ACTUAL CLASSES TAKEN	**FROM: 10**	**TO: 10**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (MAY-AUG 2022): MIC ROSC HEDULE

SUBJECT	DESIGN AND ANALYSIS OF ALGORITHMS	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	18CS42	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	23/05/22	TUE	**Module 1: Introduction:** What is an Algorithm?, Algorithm Specification	Covered	
2	24/05/22	THU	Analysis Framework , **Performance Analysis:** Space complexity, Time complexity	Covered	
3	25/05/22	FRI	**Asymptotic Notations:** Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and Little-oh notation (o)	Covered	
4	27/05/22	SAT	Mathematical analysis of recursive Algorithms with Examples	Covered	
5	28/05/22	TUE	Examples Continue.....	Covered	
6	30/05/22	THU	Mathematical analysis of Non-Recursive with Examples	Covered	
7	31/05/22	FRI	Examples Continue.....	Covered	
8	01/06/22	TUE	**Important Problem Types:** Sorting, Searching, String processing,	Covered	
9	03/06/22	THU	Graph Problems, Combinatorial Problems.	Covered	
10	04/06/22	FRI	**Fundamental Data Structures:** Stacks, Queues, Graphs	Covered	
11	06/06/22	SAT	**Fundamental Data Structures:** Trees	Covered	
12	07/06/22	TUE	**Fundamental Data Structures:** Sets and Dictionaries	Covered	

SUMMARY

PLANNED DATE	FROM: 23.05.2022	TO: 07.06.2022	
ACTUAL CLASSES TAKEN	FROM: 23/5/22	TO: 07/6/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: YES	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Sreenivasaiah
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	08/06/22	THU	**Module 2:** **Divide and Conquer:** General method, Binary search	Covered	
14	10/06/22	SAT	Recurrence equation for divide and conquer	Covered	
15	11/06/22	TUE	Finding the maximum and minimum	Covered	
16	13/06/22	THU	Merge sort	Covered	
17	14/06/22	FRI	Merge sort Continue.....	Covered	
18	15/06/22	SAT	Quick sort	Covered	
19	17/06/22	TUE	Quick sort Continue.....	Covered	
20	18/06/22	THU	Strassen's matrix multiplication	Covered	
21	20/06/22	FRI	Strassen's matrix multiplication Continue.....	Covered	
22	21/06/22	SAT	Advantages and Disadvantages of divide and conquer	Covered	
23	22/06/22	TUE	**Decrease and Conquer Approach:** Topological Sort	Covered	24/6/22.
24	23/06/22	THU	Topological Sort Continue.....	Covered	Thu Class Cancel. 24/6/22.

SUMMARY

PLANNED DATE	FROM: 08.06.2022	TO: 23.06.2022	
ACTUAL CLASSES TAKEN	FROM: 8/6/22	TO: 23/6/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukha
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572105.

MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	28/06/22	FRI	**Module 3:** **Greedy Method:** General method	Covered	
26	29/06/22	SAT	Coin Change Problem	Covered	
27	01/07/22	TUE	Knapsack Problem	Covered	
28	02/07/22	THU	Job sequencing with deadlines	Covered	
29	04/07/22	FRI	**Minimum cost spanning trees:** Prim's Algorithm	Covered	
30	05/07/22	SAT	Prim's Algorithm Continue... and Kruskal's Algorithm	Covered	
31	06/07/22	TUE	Kruskal's Algorithm Continue....	Covered	
32	08/07/22	THU	**Single source shortest paths:** Dijkstra's Algorithm	Covered	
33	09/07/22	FRI	**Optimal Tree problem:** Huffman Trees and Codes	Covered	
34	11/07/22	SAT	Huffman Trees and Codes Continue....	Covered	
35	12/07/22	TUE	**Transform and Conquer Approach:** Heaps and Heap Sort	Covered	15/7/22
36	13/07/22	THU	Heaps and Heap Sort Continue....	Covered	18/7/22

SUMMARY

PLANNED DATE	**FROM: 28.06.2022**	TO:13.07.2022	
ACTUAL CLASSES TAKEN	**FROM:** 28/6/22	TO: 18/7/22	
NUMBER OF CLASSES	**ALLOCATED:** 12	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Sathmikaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	15/07/22	FRI	**Module 4: Dynamic Programming:** General method with Examples.	Covered	19/7/22
38	16/07/22	SAT	Multistage Graphs	Covered	20/7/22
39	18/07/22	TUE	Multistage Graphs Contins....	Covered	26/7/22
40	19/07/22	THU	**Transitive Closure:** Warshall's Algorithm	Covered	
41	20/07/22	FRI	Warshall's Algorithm Contins....	Covered	
42	22/07/22	SAT	**All Pairs Shortest Paths:** Floyd's Algorithm	Covered	
43	23/07/22	TUE	Floyd's Algorithm Contins....	Covered	
44	29/07/22	THU	Optimal Binary Search Trees	Covered	
45	30/07/22	FRI	Knapsack problem	Covered	
46	04/08/22	SAT	Knapsack problem Contins....	Covered	
47	02/08/22	TUE	Travelling Sales Person problem	Covered	
48	03/08/22	THU	Reliability design	Covered	10/8/22

SUMMARY

PLANNED DATE	**FROM: 15.07.2022**	TO: 03.08.2022	
ACTUAL CLASSES TAKEN	**FROM:** 19/7/22	TO: 10/8/22	
NUMBER OF CLASSES	**ALLOCATED: 12**	TAKEN: 15	
CONTENT COVERED FOR IA	**IA 1:**	IA 2: Yes	IA 3:
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	TUTORIALS: Yes	GD/DISCUSSION: Yes
	QUIZ:	SEMINARS: Yes	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Sh[illegible]
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
PRAVEEN INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
49	05/08/22	FRI	**Module 5:** **Backtracking:** General method	Covered	13/8/22
50	06/08/22	SAT	N-Queens problem	Covered	13/8/22
51	08/08/22	TUE	Sum of subsets problem	Covered	13/8/22
52	10/08/22	THU	Graph coloring	Covered	13/8/22
53	12/08/22	FRI	Hamiltonian cycles	Covered	
54	13/08/22	SAT	**Programme and Bound:** Assignment Problem	Covered	
55	16/08/22	TUE	Assignment Problem Continu...	Covered	
56	17/08/22	THU	Travelling Sales Person problem	Covered	
57	19/08/22	FRI	**B/T Knapsack problem:** LC Programme and Bound solution , FIFO Programme and Bound solution	Covered	
58	20/08/22	SAT	**NP-Complete and NP-Hard problems:** Basic concepts.	Covered	
59	26/08/22	TUE	non-deterministic algorithms	Covered	
60	27/08/22	THU	P, NP, NP-Complete, NP-Hard classes	Covered.	24/8/22

SUMMARY

PLANNED DATE	**FROM: 05.08.2022**	TO: 27.08.2022	
ACTUAL CLASSES TAKEN	**FROM:** 13/8/22	TO: 24/8/22	
NUMBER OF CLASSES	**ALLOCATED: 12**	TAKEN: 16	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS: YES	QP DISCUSSION: YES
	QUIZ:	SEMINARS: YES	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (MAY- AUG 2022) MACROSCHEDULE

SUBJECT	DESIGN AND ANALYSIS OF ALGORITHMS	STAFF NAME	Mr. Chethan M S
SUBJECT CODE	18CS42	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

CO1: Describe computational solution to well known problems like searching, sorting etc.
CO2: Estimate the computational complexity of different algorithms.
CO3: Devise an algorithm using appropriate design strategies for problem solving.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	23.05.2022 to 07.06.2022	**Module- 1** **Introduction:** What is an Algorithm? , Algorithm Specification , Analysis Framework , Performance **Analysis**: Space complexity, Time complexity. **Asymptotic Notations:** Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and little-oh notation (o), Mathematical analysis of Non-Recursive and recursive Algorithms with Examples. **Important Problem Types:** Sorting, Searching, String processing, Graph Problems, Combinatorial Problems. **Fundamental Data Structures:** Stacks, Queues, Graphs, Trees, Sets and Dictionaries. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=0IAPZzGSbME&list=PLPJVlvt8STSSpfZ6BfbVFL4Z9ioJTcx-3 https://www.youtube.com/watch?v=GQCYDbSdSbE&list=PLrjkE1dDXnn8w1JQcSbgbmm2gbua8CYJ_ml https://www.youtube.com/watch?v=nEJed3FgLEA&list=PLbVbKqQx2AH6vbGx3N_BSmqWK4JWRbLpI&index=2
2.	08.06.2022 to 23.06.2022	**Module -2** **Divide and Conquer**: General method, Binary search, Recurrence equation for divide andconquer, Finding the maximum and minimum , Merge sort, Quick sort, Strassen's matrix multiplication , Advantages and Disadvantages of divide and conquer. **Decrease and Conquer Approach:** Topological Sort. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=2RQ3N7oePFQ https://www.youtube.com/watch?v=YAEIEvYEpCY https://www.youtube.com/watch?v=PPLuttJE7S4&list=

3.	28.06.2022 to 13.07.2022	**Module -3** **Greedy Method:** General method, Coin Change Problem, Knapsack Problem, Jobsequencing with deadlines. **Minimum cost spanning trees:** Prim'sAlgorithm, Kruskal's Algorithm. **Single source shortest paths:** Dijkstra'sAlgorithm. **Optimal Tree problem:** Huffman Trees and Codes **Transform and Conquer Approach:** Heaps and Heap Sort. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=AR6Qoqf_-NY https://www.youtube.com/watch?v=D8QgXSqeNs0 https://www.youtube.com/watch?v=fQNvI2tv5rKhE&list=PLbTqUjzm0hvGOcNhgdxmv7gAuqBEXCgd
4.	15.07.2022 to 03.08.2022	**Module -4** **Dynamic Programming:** General method with Examples, Multistage Graphs. **Transitive Closure:** Warshall's Algorithm. **All Pairs Shortest Paths:** Floyd's Algorithm. Optimal Binary Search Trees, Knapsack problem , Bellman-FordAlgorithm , Travelling Sales Person problem , Reliability design. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=5IRGRmsKUJM https://www.youtube.com/watch?v=5IRGRmsKUJM&list=PLfUIvIwIwtnUKHNJbmqTscNYvGMbvLdA7 https://www.youtube.com/watch?v=IVR2wBtvA6A&list=PLmQWeNbw3jqBqH1WS6NO89UfbmzLtQ6t https://www.youtube.com/watch?v=o9kI0rf2f9g&list=PLmQWeNbw3jqBqH1WS6NO89UfbmzLtQ6t

3.	05.08.2022 to 27.08.2022	**Module -5** **Backtracking:** General method , N-Queens problem ,Sum of subsets problem, Graph coloring, Hamiltonian cycles. **Programme andBound:** Assignment Problem, Travelling Sales Person problem, **0/1 Knapsack problem:** LC Programme and Bound solution, FIFO Programme and Bound solution. **NP-Complete and NP-Hard problems:** Basic concepts, non-deterministic algorithms, P, NP, NP-Complete, and NP-Hard classes . **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=D8CBs0BN8s https://www.youtube.com/watch?v=xDx_1B4BRSA https://www.youtube.com/watch?v=LmJ7BdKJaVM&list=PLAxmoNx7gVbtqQ8UWxlvGAZ0fbtGxNH4N https://www.youtube.com/watch?v=3BBNPk0_Q8g https://www.youtube.com/watch?v=1EEP_xNh2k https://www.youtube.com/watch?v=PfkIN9qlNH0 https://www.youtube.com/watch?v=uLmhmlN6Nq5I

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22) MACROSCHEDULE

SUBJECT	**Microcontroller and Embedded Systems**	**STAFF NAME**	**Dr. Charan K V**
SUBJECT CODE	**18CS44**	**SEM/SEC**	**IV**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- **CO1**: Describe the architectural features and instructions of ARM microcontroller
- **CO2**: Apply the knowledge gained for Programming ARM for different applications.
- **CO3**: Interface external devices and I/O with ARM microcontroller.
- **CO4**: Interpret the basic hardware components and their selection method based on the characteristics and attributes of an embedded system.
- **CO5**: Develop the hardware /software co-design and firmware design approaches.
- **CO6**: Demonstrate the need of real time operating system for embedded system applications.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	25.05.2022 to 11.06.2022	**Module 1** Microprocessors versus Microcontrollers, ARM Embedded Systems: The RISC design philosophy, The ARM Design Philosophy, Embedded System Hardware, Embedded System Software. ARM Processor Fundamentals: Registers, Current Program Status Register, Pipeline, Exceptions, Interrupts, and the Vector Table , Core Extensions	https://www.youtube.com/watch?v=0AP2eG8bME&list=PLD5Ntr0HBXNg0cR03YFI-G29xuJTrx_O https://www.youtube.com/watch?v=G02YFr5cKbE&list=PLcBATaI3jnnfwGQyNbg4mmZgkmfC3Cmtf https://www.youtube.com/watch?v=nsGtxIO7gEE&list=PLrJvNgDh2AttJ-1GA3WBBnnnWOW8bEM7SW8
2.	15.06.2022 to 02.07.2022	**Module 2** Introduction to the ARM Instruction Set : Data Processing Instructions , Programme Instructions, Software Interrupt Instructions, Program Status Register Instructions, Coprocessor Instructions, Loading Constants ARM programming using Assembly language: Writing Assembly code, Profiling and cycle counting, instruction scheduling, Register Allocation, Conditional Execution, Looping Constructs	https://www.youtube.com/watch?v=2RrZtW9yvRg https://www.youtube.com/watch?v=YAE1FsYGotA https://www.youtube.com/watch?v=PfEmf07S4hw

3.	06.07.2022 to 21.07.2022	**Module 3** Embedded System Components: Embedded Vs General computing system, History of embedded systems, Classification of Embedded systems, Major applications areas of embedded systems, purpose of embedded systems Core of an Embedded System including all types of processor/controller, Memory, Sensors, Actuators, LED, 7 segment LED display, stepper motor, Keyboard, Push button switch, Communication Interface (onboard and external types), Embedded firmware, Other system components.	https://www.youtube.com/watch?v=ARvQcqJ_-NY https://www.youtube.com/watch?v=BMOpXhq9NJI https://www.youtube.com/watch?v=GQNT0v5rKhE&list=PLrjkTuIUjurp8w6OyNhnInmn7ckuoK3XC&ref
4.	22.07.2022 to 12.08.2022	**Module 4:** Embedded System Design Concepts: Characteristics and Quality Attributes of Embedded Systems, Operational quality attributes ,non-operational quality attributes, Embedded OR Systems-Application and Domain specific, Hardware Software Co-Design and Program Modelling, embedded firmware design and development	https://www.youtube.com/watch?v=3dRGRucKU3M https://www.youtube.com/watch?v=3dRGRucKU3M&list=PLJULHvhrhE83NKbeq7acXYIcAlvJdNh https://www.youtube.com/watch?v=fvR2o0hvx8&list=PLdo5W4Nhv31adkJE1WS4MB91L8fbmZuQh https://www.youtube.com/watch?v=oNRtrCP9nE https://www.youtube.com/watch?v=Gc4mWrmJBvs
5.	13.08.2022 to 27.08.2022	**MODULE-5:** RTOS and IDE for Embedded System Design: Operating System basics, Types of operating systems, Task, process and threads (Only POSIX Threads with an example program), Thread preemption, Multiprocessing and Multitasking, Task Communication (without any program), Task synchronization issues – Racing and Deadlock, Concept of Binary and counting semaphores (Mutex example without any program), How to choose an RTOS, Integration and testing of Embedded hardware and firmware, Embedded system Development Environment – Block diagram (excluding Keil), Disassembler/decompiler, simulator, emulator and debugging techniques, target hardware debugging, boundary scan.	https://www.youtube.com/watch?v=DkCbwDfONfs https://www.youtube.com/watch?v=xEx_Hi4BSSA https://www.youtube.com/watch?v=LmU78gfCgYM&list=PL8snmNnTpVbvcQRWxJbvGA7O0bfGcNBsb https://www.youtube.com/watch?v=3RBNPv0_Q6g https://www.youtube.com/watch?v=1EEP_xNb62k https://www.youtube.com/watch?v=PBd8S9qIMRI https://www.youtube.com/watch?v=nLmbmB6NzcM

Dr. Chetan K V
Staff Incharge

Prof. C V Shanmukhaswamy
HOD, CSE

Dr. A
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021 - 22) MIC/BSC/HDLLE

SUBJECT	Microcontroller and Embedded Systems	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS44	SEM	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	25/05/22	WED	Microprocessors versus Microcontrollers	Yes	
2	26/05/22	THU	ARM Embedded Systems: The RISC design philosophy.	Yes	
3	27/05/22	FRI	The ARM Design Philosophy.	Yes	
4	28/05/22	SAT	Embedded System Hardware.	Yes	
6	1/06/22	WED	Embedded System Software.	Yes	
7	2/06/22	THU	ARM Processor Fundamentals: Registers.	Yes	
8	3/06/22	FRI	Current Program Status Register.	Yes	
9	4/06/22	SAT	Pipeline, Exceptions.	Yes	
10	8/06/22	WED	Interrupts and the Vector Table	Yes	
11	9/06/22	THU	Core Extensions	Yes	
12	10/06/22	FRI	Continue..	Yes	
13	11/06/22	SAT	Continue..	Yes	

SUMMARY

PLANNED DATE	FROM: 25/05/22	TO: 11/06/22	
ACTUAL CLASSES TAKEN	FROM: 25/05/22	TO: 11/06/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: Module 1	IA 2:	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: *	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	15/06/22	WED	Introduction to the ARM instruction Set : Data Processing Instructions ,	Yes	
14	16/06/22	THU	Programmed Instructions.	Yes	
15	17/06/22	FRI	Software Interrupt Instructions, Program Status Register Instructions.	Not Yet ✓	Complete
16	18/06/22	SAT	Coprocessor Instructions.	Not Yet ✓	Complete
17	22/06/22	WED	Loading Constants ARM programming using Assembly language	Not yet ✓	Complete
18	23/06/22	THU	Writing Assembly code.	Not Yet ✓	Completed
19	29/06/22	WED	Profiling and cycle counting.	Yes	
20	30/06/22	THU	Continue....	Yes	
21	1/07/22	FRI	Continue....	Yes	
22	2/07/22	SAT	Continue....	Yes	

SUMMARY

PLANNED DATE	FROM: 15/06/22	TO: 2/07/22	
ACTUAL CLASSES TAKEN	FROM: 15/06/22	TO: 2/7/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD CSE

Dr. Narendra Viswanath
PRINCIPAL
BHEEMA INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	6/07/22	WED	Embedded System Components. Embedded Vs General computing system.	Yes	
25	7/07/22	THU	History of embedded systems.	Yes	
26	8/07/22	FRI	Classification of Embedded systems.	Yes	
27	9/07/22	SAT	Major applications areas of embedded systems.	Yes	
28	13/07/22	WED	purpose of embedded systems Core of an Embedded System including all types of processor/controller.	Yes	
29	14/07/22	THU	Memory, Sensors, Actuators, LED.	Yes	
30	15/07/22	FRI	7 segment LED display, stepper motor, Keyboard.	Yes	
31	16/07/22	SAT	Push button switch. Communication Interface (onboard and external types).	Yes	
32	20/07/22	WED	Embedded firmware. Other system components.	Yes	
33	21/07/22	THU	Continue..	Yes	

SUMMARY

PLANNED DATE	FROM: 6/07/22	TO: 21/07/22	
ACTUAL CLASSES TAKEN	FROM: 6/07/22	TO: 21/07/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: Yes	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD-ECE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SAHYADRI INSTITUTE OF
ENGINEERING & TECHNOLOGY
MANGALURU - 575008

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	22/07/22	FRI	Embedded System Design Concepts: Characteristics and Quality Attributes of Embedded Systems.	Covered	
37	23/07/22	SAT	Operational quality attributes, non-operational quality attributes.	Covered	
38	28/07/22	THU	Continue...	Covered	
39	29/07/22	FRI	Continue...	Covered	
40	30/07/22	SAT	Continue...	Covered	
41	3/08/22	WED	Continue...	Covered	
42	4/08/22	THU	Continue...	Covered	
43	5/08/22	FRI	Embedded Systems-Application and Domain specific.	Covered	
44	6/08/22	SAT	Hardware Software Co-Design and Program Modelling.	Covered	
45	10/08/22	WED	embedded firmware design and development	Covered	
46	11/08/22	THU	Continue...	Covered	
47	12/08/22	FRI	Continue...	Covered	

SUMMARY

PLANNED DATE	FROM: 22/07/22	TO: 12/08/22	
ACTUAL CLASSES TAKEN	FROM: 22/07/22	TO: 12/08/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA1:	IA2: Yes	IA3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓ (1)	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukha
HOD CSE

Dr. Narasimha Murthy
PRINCIPAL
ACADEMY INSTITUTE OF
ENGINEERING & TECHN
TUMKUR - 572106

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	13/08/22	SAT	RTOS and IDE for Embedded System Design:	Covered	
49	17/08/22	WED	Operating System basics.	Covered	
50	18/08/22	THU	Types of operating systems,	covered	
51	19/08/22	FRI	Task, process and threads (Only POSIX Threads with an example program),	Covered	
52	20/08/22	SAT	Thread preemption, Multiprocessing and Multitasking.	Covered	
53	25/08/22	THU	Task Communication (without any program),	Covered	
54	26/08/22	FRI	Task synchronization issues – Racing and Deadlock,	Covered	
55	27/08/22	SAT	Concept of Binary and counting semaphores (Mutex example without any program),	Covered	

SUMMARY

PLANNED DATE	**FROM:** 13/08/22	**TO:** 27/08/22	
ACTUAL CLASSES TAKEN	**FROM:** 13/08/22	**TO:** 27/08/22	
NUMBER OF CLASSES	**ALLOCATED:** 19	**TAKEN:** 19	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** Yes	**IA 3:** Yes
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Dr. Charan K V
Staff Incharge

Prof. C V Sh[illegible]
HOD CSE

Dr. Narendra Viswanath
PRINCIPAL
SAHYADRI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (MAY -AUG 2022) MACROSCHEDULE

COURSE	**OBJECT ORIENTED CONCEPTS**	**STAFF NAME**	**PROF. SHANMUKA SWAMY C.V.**
COURSE CODE	**18CS45**	**SEM/SEC**	**IV SEM ISE**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- ✓ Explain the object-oriented concepts and JAVA.
- ✓ Develop computer programs to solve real world problems in Java.
- ✓ Develop simple GUI interfaces for a computer program to interact with users, and to understand
- ✓ the event-based GUI handling principles using swings.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	23.05.2022 to 08 .06.2022	**Module 1:Introduction to Object Oriented Concepts:** A Review of structures, Procedure–Oriented Programming system, Object OrientedProgramming System, Comparison of Object Oriented Language with C, Console I/O,variables and reference variables, Function Prototyping, Function Overloading. **Class andObjects:** Introduction, member functions and data, objects and functions. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=vK6ofKRw5RY https://www.cprogramming.com/tutorial/referenceparameters.html https://www.youtube.com/watch?v=-jb0mKAPEd0 https://www.youtube.com/watch?v=sFmJrdarXDA https://www.tutorialspoint.com/cplusplus/cpp_class_member_functions.htm
2	09.06.2022 to 28 .06.2022	**Module -2: Class and Objects (contd):** Objects and arrays, Namespaces, Nested classes, Constructors, Destructors. **Introduction to Java**: Java's magic: the Byte code; Java Development Kit (JDK); the JavaBuzzwords, Object-oriented programming; Simple Java programs. Data types, variables andarrays, Operators, Control Statensents. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=fPVmuzUTMm4 https://www.w3schools.com/java/java_intro.asp https://www.youtube.com/watch?v=GhzvA8t7Za https://www.youtube.com/watch?v=vBCOD3-4oaM https://www.youtube.com/watch?v=uUTq3CahRE&list=PL59LTmmGM1MM8PlLN4gMw8f7DcsVhd8s

3	29.06.2022 to 14 .07.2022	**Module -3:Classes, Inheritance,Exception Handling:** Classes: Classes fundamentals; Declaringobjects; Constructors, this keyword, garbage collection. **Inheritance:** inheritance basics,using super, creating multi level hierarchy, method overriding. **Exception handling:**Exception handling in Java **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Y-PQvBUiBX8 https://www.geeksforgeeks.org/inheritance-in-java/ https://beginnerbook.com/2014/01/method-overriding-in-java-with-example/
4	15.07.2022 to 04 .08.2022	**Module -4: Packages and Interfaces:**Packages, Access Protection, Importing Packages. Interfaces. **Multi Threaded Programming:**MultiThreaded Programming: What are threads? How to make the classes threadable ; Extending threads; Implementing runnable; Synchronization; Changing state of the thread; Bounded buffer problems, producer consumer problems. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=mlJEPYPCv0 https://www.youtube.com/watch?v=L9bSBvXBgI https://www.youtube.com/watch?v=oXbwrUUGMM https://www.java67.com/2012/12/producer-consumer-problem-with-wait-and-notify-example.html
5	05.08.2022 to 26 .08.2022	**Module -5** **Event Handling:** Two event handling mechanisms; The delegation event model; Eventclasses; Sources of events; Event listener interfaces; Using the delegation event model; Adapter classes; Inner classes. **Swings:** Swings: The origins of Swing; Two key Swing features; Components andContainers; The Swing Packages; A simple Swing Application; Create a Swing Applet; Jlabel and ImageIcon; JTextField;The Swing Buttons; JTabbedpane; JScrollPane; JList;JComboBox; JTable. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=D9mXTT-bZBM https://www.youtube.com/watch?v=8cPECDbPYg&list=PLzJmjJFugIeYqqu5vmvdHBZmfPENKDn4 http://cse.yeditepe.edu.tr/~serbright/java/Swing.html https://www.youtube.com/watch?v=80USRUWTOw

Textbooks:

1. Sourav Sahay, Object Oriented Programming with C++ , 2nd Ed, Oxford University Press,2006
2. Herbert Schildt, Java The Complete Reference, 7th Edition, Tata McGraw Hill, 2007.

Reference Books:

1. Mahesh Bhave and Sunil Patekar, "Programming with Java", First Edition, Pearson Education,2008, ISBN:9788131720806
2. Herbert Schildt, The Complete Reference C++, 4th Edition, Tata McGraw Hill, 2003.
3. Stanley B.Lippmann, Josee Lajoie, C++ Primer, 4th Edition, Pearson Education, 2005.
4. Rajkumar Buyya,S Thamarasi selvi, xingchen chu, Object oriented Programming with java, Tata McGraw Hill education private limited.
5. Richard A Johnson, Introduction to Java Programming and OOAD, CENGAGE Learning.
6. E Balagurusamy, Programming with Java A primer, Tata McGraw Hill companies.

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (MAY -AUG 2022) MICROSCHEDULE

COURSE	OBJECT ORIENTED CONCEPTS	STAFF NAME	PROF. SHANMUKA SWAMY CV
COURSE CODE	18CS45	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum ExamMarks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	24/05/22	TUE	**Introduction to Object Oriented Concepts** A Review of structures,	Yy	
2	25/05/22	WED	Procedure–Oriented Programming system	Yy	
3	26/05/22	THUR	Object OrientedProgramming System	Yy	
4	27/05/22	FRI	Comparison of Object Oriented Language with C	Yy	
5	31/05/22	TUE	Console I/O,variables and reference variables	Yy	
6	01/06/22	WED	Function Prototyping, Function Overloading.	Yy	
7	02/06/22	THUR	**Class andObjects:** Introduction	Yy	
8	03/06/22	FRI	member functions and data	Yy	
9	07/06/22	TUE	,member functions and datacont…	Yy	
10	08/06/22	WED	objects and functions.	Yy	

SUMMARY

PLANNED DATE	FROM: 24.05.2022	TO: 08.06.2022	
ACTUAL CLASSES TAKEN	FROM: 24/5/22	TO: 8/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: Yy	IA 2: —	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yy	TUTORIALS: —	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	09/06/22	THUR	**Class and Objects (contd)** Objects and arrays, Namespaces	Yes	
12	10/06/22	FRI	Nested classes, Constructors, Destructors	Yes	
13	14/06/22	TUE	**Introduction to Java**: Java's magic: the Byte code	Yes	
14	15/06/22	WED	Java Development Kit (JDK)	Yes	
15	16/06/22	THUR	the JavaBuzzwords	Yes	
16	17/06/22	FRI	Object-oriented programming	Yes	
17	21/06/22	TUE	Simple Java programs	Yes	
18	22/06/22	WED	Data types, variables andarrays	Yes	
19	23/06/22	THUR	Operators, Control Statements.	Yes	
20	28/06/22	TUE	Doubts Clearing Session	Yes	

SUMMARY

PLANNED DATE	**FROM: 09.06.2022**	**TO: 28.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 9/6/22	**TO:** 28/6/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** Yes (1hr)	**IA 2:** Yes (2hr)	**IA 3:** —
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:**	**QP DISCUSSION:** Yes
	QUIZ: —	**SEMINARS:**	**ANY OTHER:**

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MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	29/06/22	WED	**Classes, Inheritance, Exception Handling** Classes: Classes fundamentals	Yy	
22	30/06/22	THUR	Declaring objects, Constructors	Yy	
23	01/07/22	FRI	this keyword	Yy	
24	05/07/22	TUE	garbage collection.	Yy	
25	06/07/22	WED	**Inheritance:** inheritance basics	Yy	
26	07/07/22	THUR	using super	Yy	
27	08/07/22	FRI	creatingmulti level hierarchy, method overriding.	Yy	
28	12/07/22	TUE	**Exception handling:**Exception handling in Java	Yy	
29	13/07/22	WED	Exception handling in Java	Yy	
30	14/07/22	THUR	Doubts Clearing Session	Yy	

SUMMARY

PLANNED DATE	**FROM: 29.06.2022**	**TO:14.07.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 29/6/22	**TO:** 14/7/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** Yy	**IA 3:** —
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yy	**TUTORIALS:** —	**QP DISCUSSION:** Yy
	QUIZ: —	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	15/07/22	FRI	**Packages and Interfaces**	Y4	
32	19/07/22	TUE	Packages, Access Protection	Y4	
33	20/07/22	WED	Importing Packages, Interfaces.	Y4	
34	21/07/22	THUR	Importing Packages, Interfacescontn…	Y4	
35	22/07/22	FRI	**Multi Threaded Programming:**Multi Threaded Programming	Y4	
36	28/07/22	THUR	What are threads? How to make the classes threadable	Y4	
37	29/07/22	FRI	Extending threads, Implementing runnable	Y4	
38	02/08/22	TUE	Synchronization, Changing state of the thread	Y4	
39	03/08/22	WED	Bounded buffer problems, producer consumer problems	Y4	
40	04/08/22	THUR	Previous Question Paper Solution Discussion	Y4	

SUMMARY

PLANNED DATE	**FROM:15.07.2022**	**TO: 04.08.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 15/7/22	**TO:** 4/8/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** Y4(3)	**IA 3:** Y4(7)
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Y4	**TUTORIALS:** —	**QP DISCUSSION:** Y4
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	05/08/22	FRI	**Event Handling:** Two event handling mechanisms	Yy	
42	10/08/22	WED	The delegation event model,Eventclasses	Yy	
43	11/07/22	THUR	Sources of events, Event listener interfaces . Using the delegation event model	Yy	
44	12/07/22	FRI	Adapter classes, Inner classes.	Yy	
45	16/07/22	TUE	**Swings:** Swings: The origins of Swing, Two key Swing features	Yy	
46	17/08/22	WED	Components and Containers, The Swing Packages	Yy	
47	18/08/22	THUR	A simple Swing Application, Create a Swing Applet, Jlabel and Imageicon	Yy	
48	19/08/22	FRI	JTextField, The Swing Buttons, JTabbedpane	Yy	
49	25/08/22	THUR	JScrollPane, JList, JComboBox, JTable.	Yy	
50	26/08/21	FRI	Previous Question Paper Solution Discussion	Yy	

SUMMARY

PLANNED DATE	**FROM: 05.08.2022**	**TO: 26.08.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 5/8/22	**TO:** 26/8/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** —	**IA 3:** Yy
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yy	**TUTORIALS:** No	**QP DISCUSSION:** Yy
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (MAY -AUG 2022) MACROSCHEDULE

COURSE	**OBJECT ORIENTED CONCEPTS**	**STAFF NAME**	**PROF. SHANMUKA SWAMY C.V.**
COURSE CODE	**18CS45**	**SEM/SEC**	**IV**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- ✓ Explain the object-oriented concepts and JAVA.
- ✓ Develop computer programs to solve real world problems in Java.
- ✓ Develop simple GUI interfaces for a computer program to interact with users, and to understand
- ✓ the event-based GUI handling principles using swings.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	23.05.2022 to 08 .06.2022	**Module 1:Introduction to Object Oriented Concepts:** A Review of structures, Procedure-Oriented Programming system, Object OrientedProgramming Systems, Comparison of Object Oriented Language with C, Console I/O,variables and reference variables, Function Prototyping, Function Overloading. **Class andObjects:** Introduction, member functions and data, objects and functions. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=wK6z0KRm5BY https://www.programming.com/tutorial/references.html https://www.youtube.com/watch?v=d6dmKAPFz0Q https://www.youtube.com/watch?v=vEm3rdxcXDA https://www.tutorialspoint.com/cplusplus/cpp_class_member_functions.htm
2	09.06.2022 to 28 .06.2022	**Module -2: Class and Objects (contd):** Objects and arrays, Namespaces, Nested classes, Constructors, Destructors. **Introduction to Java**: Java's magic: the Byte code; Java Development Kit (JDK); the JavaBuzzwords, Object-oriented programming; Simple Java programs. Data types, variables andarrays, Operators, Control Statements. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=PVzuzUTMm4 https://www.w3schools.com/java/java_intro.asp https://www.youtube.com/watch?v=5BuvzAbt7Zg https://www.youtube.com/watch?v=vBCOTL4ouM https://www.youtube.com/watch?v=siUTq3CshRE&list=PL898LTmmGM1MM58BPILN4aMwM7DcaVldb

3	29.06.2022 to 14 .07.2022	**Module -3:Classes, Inheritance,Exception Handling:** Classes: Classes fundamentals; Declaringobjects; Constructors, this keyword, garbage collection. **Inheritance:** inheritance basics,using super, creating multi level hierarchy, method overriding. **Exception handling:**Exception handling in Java **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=N-PQvhU0YI8 https://www.geeksforgeeks.org/inheritance-in-java/ https://beginnerbook.com/2014/01/method-overriding-in-java-with-example/
4	15.07.2022 to 04 .08.2022	**Module -4: Packages and Interfaces:**Packages, Access Protection, Importing Packages. Interfaces. **Multi Threaded Programming:**MultiThreaded Programming: What are threads? How to make the classes threadable ; Extending threads; Implementing runnable; Synchronization; Changing state of the thread; Bounded buffer problems, producer consumer problems. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=mjEP3PCc8 https://www.youtube.com/watch?v=L9bO8vXBaI https://www.youtube.com/watch?v=exXberUSGMM https://www.java67.com/2012/12/producer-consumer-problem-with-wait-and-notify-example.html
5	05.08.2022 to 26 .08.2022	**Module -5** **Event Handling:** Two event handling mechanisms; The delegation event model; Eventclasses; Sources of events; Event listener interfaces; Using the delegation event model; Adapter classes; Inner classes. **Swings:** Swings: The origins of Swing; Two key Swing features; Components andContainers; The Swing Packages; A simple Swing Application; Create a Swing Applet; Jlabel and Imageicon; JTextField;The Swing Buttons; JTabbedpane; JScrollPane; JList;JComboBox; JTable. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=lNmXTTAfBM https://www.youtube.com/watch?v=KeP1C0tqPVg&list=PLLJm3EmTsYqnc5emvoHHRZmf0PNKOn4 http://cse.stanbenoit.edu/mailbright/java/Swing.html https://www.youtube.com/watch?v=B0U5R0Y9TOs

Textbooks:
1. Sourav Sahay, Object Oriented Programming with C++ , 2nd Ed, Oxford University Press,2006
2. Herbert Schildt, Java The Complete Reference, 7th Edition, Tata McGraw Hill, 2007.

Reference Books:

1. Mahesh Bhave and Sunil Patekar, "Programming with Java", First Edition, Pearson Education,2008, ISBN:9788131720806
2. Herbert Schildt, The Complete Reference C++, 4th Edition, Tata McGraw Hill, 2003.
3. Stanley B.Lippmann, Josee Lajore, C++ Primer, 4th Edition, Pearson Education, 2005.
4. Rajkumar Buyya,S Thamarasi selvi, xingchen chu, Object oriented Programming with java, Tata McGraw Hill education private limited.
5. Richard A Johnson, Introduction to Java Programming and OOAD, CENGAGE Learning.
6. E Balagurusamy, Programming with Java A primer, Tata McGraw Hill companies.

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (MAY -AUG 2022) MICROSCHEDULE

COURSE	OBJECT ORIENTED CONCEPTS	STAFF NAME	PROF. C.V.SHANMUKA SWAMY
COURSE CODE	18CS45	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum ExamMarks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	24/05/22	TUE	**Introduction to Object Oriented Concepts** A Review of structures,	Yes	
2	25/05/22	WED	Procedure-Oriented Programming system	Yes	
3	26/05/22	THUR	Object OrientedProgramming System	Yes	
4	27/05/22	FRI	Comparison of Object Oriented Language with C	Yes	
5	31/05/22	TUE	Console I/O,variables and reference variables	Yes	
6	01/06/22	WED	Function Prototyping, Function Overloading.	Yes	
7	02/06/22	THUR	**Class andObjects:** Introduction	Yes	
8	03/06/22	FRI	member functions and data	Yes	
9	07/06/22	TUE	,member functions and datacont…	Yes	
10	08/06/22	WED	objects and functions.	Yes	

SUMMARY

PLANNED DATE	FROM: 24.05.2022	TO: 08.06.2022	
ACTUAL CLASSES TAKEN	FROM: 24/5/22	TO: 8/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2: —	IA 3: —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: —	QP DISCUSSION: Yes
	QUIZ:	SEMINARS: —	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	09/06/22	THUR	**Class and Objects (contd)** Objects and arrays, Namespaces	Yes	
12	10/06/22	FRI	Nested classes, Constructors, Destructors	Yes	
13	14/06/22	TUE	**Introduction to Java:** Java's magic: the Byte code	Yes	
14	15/06/22	WED	Java Development Kit (JDK)	Yes	
15	16/06/22	THUR	the JavaBuzzwords	Yes	
16	17/06/22	FRI	Object-oriented programming	Yes	
17	21/06/22	TUE	Simple Java programs	Yes	
18	22/06/22	WED	Data types, variables andarrays	Yes	
19	23/06/22	THUR	Operators, Control Statements.	Yes	
20	28/06/22	TUE	Doubts Clearing Session	Yes	

SUMMARY

PLANNED DATE	**FROM: 09.06.2022**	**TO: 28.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 9/6/22	**TO:** 28/6/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** Yes (1/2)	**IA 2:** Yes (3/4)	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** —	**QP DISCUSSION:** Yes
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:**

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MODULE III					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
21	29/06/22	WED	**Classes, Inheritance, Exception Handling** Classes: Classes fundamentals	Yes	
22	30/06/22	THUR	Declaring objects, Constructors	Yes	
23	01/07/22	FRI	this keyword	Yes	
24	05/07/22	TUE	garbage collection.	Yes	
25	06/07/22	WED	**Inheritance:** inheritance basics	Yes	
26	07/07/22	THUR	using super	Yes	
27	08/07/22	FRI	creatingmulti level hierarchy, method overriding.	Yes	
28	12/07/22	TUE	**Exception handling:**Exception handling in Java	Yes	
29	13/07/22	WED	Exception handling in Java	Yes	
30	14/07/22	THUR	Doubts Clearing Session	Yes	

SUMMARY

PLANNED DATE	**FROM: 29.06.2022**	**TO:14.07.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 29/6/22	**TO:** 14/7/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** Yes	**IA 3:** —
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** —	**QP DISCUSSION:** Yes
	QUIZ: —	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
31	15/07/22	FRI	**Packages and Interfaces**	Y4	
32	19/07/22	TUE	Packages, Access Protection	Y4	
33	20/07/22	WED	Importing Packages, Interfaces.	Y4	
34	21/07/22	THUR	Importing Packages, Interfacescontn…	Y4	
35	22/07/22	FRI	**Multi Threaded Programming:**Multi Threaded Programming	Y4	
36	28/07/22	THUR	What are threads? How to make the classes threadable	Y4	
37	29/07/22	FRI	Extending threads, Implementing runnable	Y4	
38	02/08/22	TUE	Synchronization, Changing state of the thread	Y4	
39	03/08/22	WED	Bounded buffer problems, producer consumer problems	Y4	
40	04/08/22	THUR	Previous Question Paper Solution Discussion	Y4	

SUMMARY

PLANNED DATE	**FROM:15.07.2022**	**TO: 04.08.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 15/8/22	**TO:** 4/8/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** Y4 (2)	**IA 3:** Y4 (7)
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
41	05/08/22	FRI	**Event Handling:** Two event handling mechanisms	Yes	
42	10/08/22	WED	The delegation event model,Eventclasses	Yes	
43	11/07/22	THUR	Sources of events, Event listener interfaces , Using the delegation event model	Yes	
44	12/07/22	FRI	Adapter classes, Inner classes.	Yes	
45	16/07/22	TUE	**Swings:** Swings: The origins of Swing, Two key Swing features	Yes	
46	17/08/22	WED	Components and Containers, The Swing Packages	Yes	
47	18/08/22	THUR	A simple Swing Application, Create a Swing Applet, Jlabel and Imageicon	Yes	
48	19/08/22	FRI	JTextField, The Swing Buttons, JTabbedpane	Yes	
49	25/08/22	THUR	JScrollPane, JList, JComboBox, JTable.	Yes	
50	26/08/21	FRI	Previous Question Paper Solution Discussion	Yes	

SUMMARY

PLANNED DATE	**FROM: 05.08.2022**	**TO: 26.08.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 5/8/22	**TO:** 26/8/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** —	**IA 3:** Yes
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:** —	**QP DISCUSSION:** Yes
	QUIZ: —	**SEMINARS:**	**ANY OTHER:**

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (MAY- AUG 2022) MACROSCHEDULE

SUBJECT	DATA COMMUNICATION	STAFF NAME	Mrs Ayisha khanum
SUBJECT CODE	18CS46	SEM/SEC	IV
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- CO1: Comprehend the transmission technique of digital data between two or more computers and a computer network that allows computers to exchange data.
- CO2: Explain with the basics of data communication and various types of computer networks.
- CO3: Demonstrate Medium Access Control protocols for reliable and noisy channels. Expose wireless and wired LANs

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	23.05.2022 to 09.06.2022	**Module -1** **Introduction:** Data Communications, Networks, Network Types, Internet History, Standards And Administration **Networks Models**: Protocol Layering, TCP/IP Protocol suite, The OSI model. **Introduction to Physical Layer-1:** Data and Signals, Digital Signals, Transmission Impairment, Data Rate limits, Performance. **No. of Contact Sessions: 08**	https://youtu.be/2dogvSPSLPc https://youtu.be/z9AEJbHQbRU https://youtu.be/8pKHqJA-o5g
2.	10.06.2022 to 01.07.2022	**Module -2** **Digital Transmission**: Digital to digital conversion (Only Line coding: Polar, Bipolar and Manchester coding) **Physical Layer-2:** Analog to digital conversion (only PCM), Transmission Modes. **Analog Transmission**: Digital to analog conversion **No. of Contact Sessions: 08**	https://youtu.be/3qdq7j1l9A0 https://youtu.be/z-aX8OLaWXI https://youtu.be/d-Jy1586FRM

3.	04.07.2022 to 21.07.2022	**Module -3** **Bandwidth Utilization**: Multiplexing and Spread Spectrum. **Switching**: Introduction, Circuit Switched Networks and Packet switching. **Error Detection and Correction**: Introduction, Block coding, cyclic codes, Checksum. **No. of Contact Sessions: 08**	https://youtu.be/zAe5cmXRKz0 https://youtu.be/aUbnVk26SGk https://youtu.be/bWEpIN4VEY https://youtu.be/vAlwIbWNTMc
4.	22.07.2022 to 08.08.2022	**Module –4** **Data link control**: DLC services, Data link layer protocols, Point to Point protocol (Framing, Transition phases only). **Media Access control**: Random Access, Controlled Access and Channelization. **Introduction to Data-Link Layer**: Introduction, Link-Layer Addressing, ARP. **IPv4 Addressing and subnetting:** Classful and CIDR addressing, DHCP, NAT. **No. of Contact Sessions: 08**	https://youtu.be/_MbLvIUUnqk https://youtu.be/5AWGWIYHM https://youtu.be/TWOMuHTW https://youtu.be/FPwjmwkvQs https://youtu.be/73PKBOuDWo

8.	11.08.2022 to 27.08.2022	**Module -5** **Wired LANs Ethernet**: Ethernet Protocol, Standard Ethernet, Fast Ethernet, Gigabit Ethernet and 10 Gigabit Ethernet. **Wireless LANs:** Introduction, IEEE 802.11 Project and Bluetooth. **No. of Contact Sessions: 08**	https://youtu.be/J85vtDKJHDo?si=[illegible] https://youtu.be/c6z5x3AbnLo&[illegible] https://youtu.be/LLEPAzMGuBY https://youtu.be/ZxKqvFuIV1E

Mrs Ayesha Khanum
Staff Incharge

Mr Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (MAY- AUG 2022) MACROSCHEDULE

SUBJECT	**DATA COMMUNICATION**	**STAFF NAME**	**Mrs Ayisha khanum**
SUBJECT CODE	**18CS46**	**SEM/SEC**	**IV**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- **CO1: Comprehend the transmission technique of digital data between two or more computers and a computer network that allows computers to exchange data.**
- **CO2: Explain with the basics of data communication and various types of computer networks.**
- **CO3: Demonstrate Medium Access Control protocols for reliable and noisy channels. Expose wireless and wired LANs.**

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	23.05.2022 to 09.06.2022	**Module -1** **Introduction:** Data Communications, Networks, Network Types, Internet History, Standards And Administration **Networks Models:** Protocol Layering, TCP/IP Protocol suite, The OSI model. **Introduction to Physical Layer-1:** Data and Signals, Digital Signals, Transmission Impairment, Data Rate limits, Performance. **No. of Contact Sessions: 08**	https://youtu.be/mbwp3P5uEs https://youtu.be/c9AEBdBQkHE https://youtu.be/8gKBI6jI3cE&t
2.	10.06.2022 to 01.07.2022	**Module -2** **Digital Transmission**: Digital to digital conversion (Only Line coding: Polar, Bipolar and Manchester coding). **Physical Layer-2:** Analog to digital conversion (only PCM), Transmission Modes. **Analog Transmission**: Digital to analog conversion. **No. of Contact Sessions: 08**	https://youtu.be/3ubaf3JfD8A https://youtu.be/cgXBJLkWXI https://youtu.be/4-bi2ORfDI0

3.	04.07.2022 to 21.07.2022	**Module -3** **Bandwidth Utilization**: Multiplexing and Spread Spectrum. **Switching**: Introduction, Circuit Switched Networks and Packet switching. **Error Detection and Correction**: Introduction, Block coding, cyclic codes, Checksum. **No. of Contact Sessions: 08**	https://youtu.be/zAc8qwXRKz0 https://youtu.be/aUhmVk2rNAc https://youtu.be/bWJ-tlN4VEY https://youtu.be/xAhvBrWNTMc
4.	22.07.2022 to 08.08.2022	**Module –4** **Data link control**: DLC services, Data link layer protocols, Point to Point protocol (Framing, Transition phases only). **Media Access control**: Random Access, Controlled Access and Channelization. **Introduction to Data-Link Layer:** Introduction, Link-Layer Addressing, ARP. **IPv4 Addressing and subnetting:** Classful and CIDR addressing, DHCP, NAT. **No. of Contact Sessions: 08**	https://youtu.be/_8NLtI3Ucsk https://youtu.be/5AW1z9UJ3I0 https://youtu.be/9Mi9bbHTSI https://youtu.be/TPwpvvwvIdI https://youtu.be/7VPkW0ivP6s

5	11.08.2022 to 27.08.2022	**Module -5** **Wired LANs: Ethernet**: Ethernet Protocol, Standard Ethernet, Fast Ethernet, Gigabit Ethernet and 10 Gigabit Ethernet. **Wireless LANs:** Introduction, IEEE 802.11 Project and Bluetooth. **No. of Contact Sessions: 08**	https://youtu.be/RSvQ8cR8vzE?si= https://youtu.be/xbzSuVA4mvo& https://youtu.be/LEWxd4-iJBc https://youtu.be/ZvAqeEeOUE

Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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ENGINEERING & TECHNOLOGY
TUMKUR - 572106

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (MAY-AUG 2022)

Name of the Staff : Mr Chethan M S, Mr. Kiran G M *Sub.Code* : 18CSL47

***Subject*: Design and Analysis of Algorithms Laboratory**

***Class*: IV SEM, A2 Batch**

Course Learning Objectives: This course (18CSL47) will enable students to:

- Design and implement various algorithms in JAVA
- Employ various design strategies for problem solving.
- Measure and compare the performance of different algorithms.

Sl	Date	Planned portion	Executed Portion	Remarks
01	23/05/2022	**1a.** Create a Java class called ***Student*** with the following details as variables within it. (i) USN (ii) Name (iii) Programme (iv) Phone Write a Java program to create *n*Student objects and print the USN, Name, Programme, andPhoneof these objects with suitable headings. **1b.** Write a Java program to implement the Stack using arrays. Write Push(), Pop(), andDisplay() methods to demonstrate its working.		Covered
	30/05/2022	**2 a.** Design a superclass called ***Staff*** with details as StaffId, Name, Phone, Salary. Extend this class by writing three subclasses namely ***Teaching*** (domain, publications), ***Technical*** (skills), and ***Contract*** (period). Write a Java program to read and display at least 3 *staff* objects of all three categories. **2 b.** Write a Java class called ***Customer*** to store their name and date_of_birth. The date_of_birth format should be dd/mm/yyyy. Write methods to read customer data as <name, dd/mm/yyyy> and display as <name, dd, mm, yyyy> using StringTokenizer class considering the delimiter character as "/".		Covered
03	06/06/2022	**3 a.** Write a Java program to read two integers *a* and*b*. Compute *a*/*b* and print, when *b* is not zero. Raise an exception when *b* is equal to zero. **3 b.** Write a Java program that implements a multi-thread application that has three threads. First thread generates a random integer for every 1 second; second thread computes the square ofthe number and prints; third thread will print the value of cube of the number.		Covered

04	13/06/2022	**4.** Sort a given set of *n* integer elements using **Quick Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000 and record the time taken to sort. Plot a graph of the time taken versus *n* on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.		Covered
05	20/06/2022	**5.** Sort a given set of *n* integer elements using **Merge Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000, and record the time taken to sort. Plot a graph of the time taken versus *n* on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.		Covered
	04/07/2022	**6.** Implement in Java, the **0/1 Knapsack** problem using (a) Dynamic Programming method (b) Greedy method.		Covered
07	11/07/2022	**7.** From a given vertex in a weighted connected graph, find shortest paths to other vertices using **Dijkstra's algorithm**. Write the program in Java.		Covered
08	18/07/2022	**8.** Find Minimum Cost Spanning Tree of a given connected undirected graph using **Kruskal'salgorithm.** Use Union-Find algorithms in your program		Covered
09	20/07/2022	**9.** Find Minimum Cost Spanning Tree of a given connected undirected graph using **Prim's algorithm.**		Extra Covered
10	01/08/2022	**10.** Write Java programs to (a) Implement All-Pairs Shortest Paths problem using **Floyd's algorithm.** (b)Implement **Travelling Sales Person problem** using Dynamic programming.		Covered
	03/08/2022	**11.** Design and implement in Java to find a **subset** of a given set **S** = {S1, S2,.....,Sn} of *n* positive integers whose SUM is equal to a given positive integer *d*. For example, if S ={1, 2,5, 6, 8} and *d*= 9, there are two solutions {1,2,6}and {1,8}. Display a suitable message, ifthe given problem instance doesn't have a solution.		Extra Covered
12	08/08/2022	**12.** Design and implement in Java to find all **Hamiltonian Cycles** in a connected undirected Graph G of *n* vertices using backtracking principle.		Covered
13	10/08/2022	Lab Internals I		Extra Completed
14	17/08/2022	Lab Internals II		Extra Completed

[Mr. Chethan M S / Mr. Kiran G M]
STAFF-IN CHARGE

PRINCIPAL
BIET, TUMAKURU.

[Prof. C V Shanmukaswamy]
HOD, CSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (MAY-AUG 2022)

Name of the Staff : Mr Chethan M S, Mr. Kiran G M *Sub.Code* : 18CSL47

Subject: **Design and Analysis of Algorithms Laboratory**

Class: **IV SEM, A3 Batch**

Course Learning Objectives: This course (18CSL47) will enable students to:

- Design and implement various algorithms in JAVA
- Employ various design strategies for problem solving
- Measure and compare the performance of different algorithms

no.	Date	Planned portion	Executed Portion	Remarks
01	25/05/2022	**1a.** Create a Java class called ***Student*** with the following details as variables within it. (i) USN (ii) Name (iii) Programme (iv) Phone Write a Java program to create *nStudent* objects and print the USN, Name, Programme, andPhoneof these objects with suitable headings. **1b.** Write a Java program to implement the Stack using arrays. Write Push(), Pop(), andDisplay() methods to demonstrate its working.		Covered
02	01/06/2022	**2 a.** Design a superclass called ***Staff*** with details as StaffId, Name, Phone, Salary. Extend this class by writing three subclasses namely ***Teaching*** (domain, publications), ***Technical*** (skills), and ***Contract*** (period). Write a Java program to read and display at least 3 *staff* objects of all three categories. **2 b.** Write a Java class called ***Customer*** to store their name and date_of_birth. The date_of_birth format should be dd/mm/yyyy. Write methods to read customer data as <name, dd/mm/yyyy> and display as <name, dd, mm, yyyy> using StringTokenizer class considering the delimiter character as "/".		Covered
03	08/06/2022	**3 a.** Write a Java program to read two integers *a* and*b*. Compute *a/b* and print, when *b* is not zero. Raise an exception when *b* is equal to zero. **3 b.** Write a Java program that implements a multi-thread application that has three threads. First thread generates a random integer for every 1 second; second thread computes the square ofthe number and prints; third thread will print the value of cube of the number.		Covered

04	15/06/2022	**4.** Sort a given set of ***n*** integer elements using **Quick Sort** method and compute its time complexity. Run the program for varied values of n> 5000 and record the time taken to sort. Plot a graph of the time taken versus ***n*** on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.		Covered
05	22/06/2022	**5.** Sort a given set of ***n*** integer elements using **Merge Sort** method and compute its time complexity. Run the program for varied values of n> 5000, and record the time taken to sort. Plot a graph of the time taken versus ***n*** on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.		Covered
06	29/06/2022	**6.** Implement in Java, the **0/1 Knapsack** problem using (a) Dynamic Programming method (b) Greedy method.		Covered
07	06/07/2022	**7.** From a given vertex in a weighted connected graph, find shortest paths to other vertices using **Dijkstra's algorithm**. Write the program in Java.		Covered
08	13/07/2022	**8.** Find Minimum Cost Spanning Tree of a given connected undirected graph using **Kruskal'salgorithm.** Use Union-Find algorithms in your program		Covered
09	20/07/2022	**9.** Find Minimum Cost Spanning Tree of a given connected undirected graph using **Prim's algorithm.**		Covered
10	01/08/2022	**10.** Write Java programs to (a) Implement All-Pairs Shortest Paths problem using **Floyd's algorithm.** (b)Implement **Travelling Sales Person problem** using Dynamic programming.		Extra Covered
11	03/08/2022	**11.** Design and implement in Java to find a **subset** of a given set **S** = {S1, S2,.....Sn} of ***n*** positive integers whose SUM is equal to a given positive integer ***d***. For example, if S ={1, 2,5, 6, 8} and ***d***= 9, there are two solutions {1,2,6}and {1,8}. Display a suitable message, ifthe given problem instance doesn't have a solution.		Covered
12	08/08/2022	**12.** Design and implement in Java to find all **Hamiltonian Cycles** in a connected undirected Graph G of *n* vertices using backtracking principle.		Extra Covered
13	10/08/2022	Lab Internals I		Completed
14	17/08/2022	Lab Internals II		Completed

[Mr. Chethan M S / Mr. Kiran G M]
STAFF-IN CHARGE

[Prof. C V Shivamukaswamy]
HOD, CSE

PRINCIPAL
SIET, TUMAKURU

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (MAY-AUG 2022)

Name of the Staff : Mr Chethan M S, Mr. Kiran G M *Sub.Code* : 18CSL47

Subject: **Design and Analysis of Algorithms Laboratory**

Class: **IV SEM, A1 Batch**

Course Learning Objectives: This course (18CSL47) will enable students to:

- Design and implement various algorithms in JAVA
- Employ various design strategies for problem solving.
- Measure and compare the performance of different algorithms.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	24/05/2022	**1a.** Create a Java class called ***Student*** with the following details as variables within it. (i) USN (ii) Name (iii) Programme (iv) Phone Write a Java program to create *n*Student objects and print the USN, Name, Programme, andPhoneof these objects with suitable headings. **1b.** Write a Java program to implement the Stack using arrays. Write Push(), Pop(), andDisplay() methods to demonstrate its working.		Covered
02	31/05/2022	**2 a.** Design a superclass called ***Staff*** with details as StaffId, Name, Phone, Salary. Extend this class by writing three subclasses namely ***Teaching*** (domain, publications), ***Technical*** (skills), and ***Contract*** (period). Write a Java program to read and display at least 3 *staff* objects of all three categories. **2 b.** Write a Java class called ***Customer*** to store their name and date_of_birth. The date_of_birth format should be dd/mm/yyyy. Write methods to read customer data as <name, dd/mm/yyyy> and display as <name, dd, mm, yyyy> using StringTokenizer class considering the delimiter character as "/".		Covered
03	07/05/2022	**3 a.** Write a Java program to read two integers *a* and*b*. Compute *a*/*b* and print, when *b* is not zero. Raise an exception when *b* is equal to zero. **3 b.** Write a Java program that implements a multi-thread application that has three threads. First thread generates a random integer for every 1 second; second thread computes the square ofthe number and prints; third thread will print the value of cube of the number.		Covered

04	14/06/2022	**4.** Sort a given set of ***n*** integer elements using **Quick Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000 and record the time taken to sort. Plot a graph of the time taken versus ***n***on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.		Covered
05	21/06/2022	**5.** Sort a given set of ***n*** integer elements using **Merge Sort** method and compute its time complexity. Run the program for varied values of *n*> 5000, and record the time taken tosort. Plot a graph of the time taken versus ***n***on graph sheet. The elements can be read from a file or can be generated using the random number generator. Demonstrate using Java how the divide-and-conquer method works along with its time complexity analysis: worst case, average case and best case.		Covered
06	28/06/2022	**6.** Implement in Java, the **0/1 Knapsack** problem using (a) Dynamic Programming method (b) Greedy method.		Covered
07	05/07/2022	**7.** From a given vertex in a weighted connected graph, find shortest paths to other vertices using **Dijkstra's algorithm**. Write the program in Java.		Covered
08	12/07/2022	**8.** Find Minimum Cost Spanning Tree of a given connected undirected graph using **Kruskal'salgorithm.** Use Union-Find algorithms in your program		Covered
09	19/07/2022	**9.** Find Minimum Cost Spanning Tree of a given connected undirected graph using **Prim's algorithm**.		
10	02/08/2022	**10.** Write Java programs to (a) Implement All-Pairs Shortest Paths problem using **Floyd's algorithm.** (b)Implement **Travelling Sales Person problem** using Dynamic programming.		Covered
11	03/08/2022	**11.** Design and implement in Java to find a **subset** of a given set **S** = {S1, S2,.....Sn} of ***n*** positive integers whose SUM is equal to a given positive integer ***d***. For example, if S ={1, 2,5, 6, 8} and *d*= 9, there are two solutions {1,2,6}and {1,8}. Display a suitable message, ifthe given problem instance doesn't have a solution.		Extra Covered
12	10/08/2022	**12.** Design and implement in Java to find all **Hamiltonian Cycles** in a connected undirected Graph G of *n* vertices using backtracking principle.		Extra Covered
13	16/08/2022	Lab Internals I		Completed
14	17/08/2022	Lab Internals II		Extra Completed

[Mr. Chethan M S / Mr. Kiran G M]
STAFF-IN CHARGE

[Prof. C V Shanmukaswamy]
HOD, CSE

PRINCIPAL
SIET, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : IV (BE) Year:2021-22

Subject Title: MICROCONTROLLER AND EMBEDDED SYSTEMS LABORATORY	Subject Code: 18CSL48
Number of Contact Hours/Week 0:2:2 Total Number of Lab Contact Hours 36	Duration of Exam: 03 Hrs.
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 28/05/2022
Checked by: Prof. Shanmuka Swamy C V	Date: 28/05/2022

Objectives:

- Develop and test Program using ARM7TDMI/LPC2148.
- Conduct the experiments on an ARM7TDMI/LPC2148 evaluation board using evaluation version of Embedded 'C' & Keil Uvision-4 tool/compiler.

Outcomes:

- . Develop and test program using ARM7TDMI/LPC2148.
- Conduct the following experiments on an ARM7TDMI/LPC2148 evaluation board using evaluation version of Embedded 'C' & Keil Uvision-4 tool/compiler.

Sl No	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	30/5/22	Write a program to multiply two 16 bit binary numbers.	Yes	
2	6/6/22	Write a program to find the sum of first 10 integer numbers.	Yes	
3	6/6/22	Write a program to find factorial of a number.	Yes	
4	13/6/22	Write a program to create an activity with two buttons START and STOP.	Yes	
5	13/6/22	Write a program to find the square of a number (1 to 10) using look-up table.	Yes	
6	20/6/22	Write a program to find the largest/smallest number in an array of 32 numbers.	Yes	
7	20/6/22	Write a program to arrange a series of 32 bit numbers in ascending/descending order.	Yes	
8	27/6/22	Write a program to count the number of ones and zeros in two consecutive memory locations.	Yes	
9	4/7/22	IA – 1	Conducted	

		PART – B		
10	11/7/22	Display "Hello World" message using Internal UART		
11	11/7/22	Interface and Control a DC Motor.		
12	18/7/22	Interface a Stepper motor and rotate it in clockwise and anti-clockwise direction.		
13	18/7/22	Determine Digital output for a given Analog input using Internal ADC of ARM controller.		
14	18/7/22	Interface a DAC and generate Triangular and Square waveforms.		
16	1/8/22	Interface a 4x4 keyboard and display the key code on an LCD.		
17	8/8/22	Demonstrate the use of an external interrupt to toggle an LED On/Off.		
18	8/8/22	Display the Hex digits 0 to F on a 7-segment LED interface, with an appropriate delay in between		
19	15/8/22	IA –2		

Dr. Charan K V
Staff in charge

Prof. Shanmukha Swamy C V
HOD- CSE

Dr. Narendra Viswanath
Principal
PROFESSOR
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TUMAKURU - 572106

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : IV (B2) Year:2021-22

Subject Title: MICROCONTROLLER AND EMBEDDED SYSTEMS LABORATORY	Subject Code: 18CSL48
Number of Contact Hours/Week 0:2:2 Total Number of Lab Contact Hours 36	Duration of Exam: 03 Hrs.
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 28/05/2022
Checked by: Prof. Shanmuka Swamy C V	Date: 28/05/2022

Objectives:

- Develop and test Program using ARM7TDMI/LPC2148.
- Conduct the experiments on an ARM7TDMI/LPC2148 evaluation board using evaluation version of Embedded 'C' & Keil Uvision-4 tool/compiler.

Outcomes:

- Develop and test program using ARM7TDMI/LPC2148.
- Conduct the following experiments on an ARM7TDMI/LPC 2148 evaluation board using evaluation version of Embedded 'C' & Keil Uvision-4 tool/compiler.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	31/5/22	Write a program to multiply two 16 bit binary numbers.	Yes	
2	7/6/22	Write a program to find the sum of first 10 integer numbers.	Yes	
3	7/6/22	Write a program to find factorial of a number.	Yes	
4	14/6/22	Write a program to create an activity with two buttons START and STOP.	Yes	
5	14/6/22	Write a program to find the square of a number (1 to 10) using look-up table.	Yes	
6	21/6/22	Write a program to find the largest/smallest number in an array of 32 numbers.	Yes	
7	21/6/22	Write a program to arrange a series of 32 bit numbers in	Yes	

		ascending/descending order.	Yes	
8	28/6/22	Write a program to count the number of ones and zeros in two consecutive memory locations.	Yes	
9	5/7/22	IA – 1	Yes d12	
		PART – B		
10	5/7/22	Display "Hello World" message using Internal UART	Yes	
11	12/7/22	Interface and Control a DC Motor.	Yes	
12	12/7/22	Interface a Stepper motor and rotate it in clockwise and anti-clockwise direction.	Yes	
13	19/7/22	Determine Digital output for a given Analog input using Internal ADC of ARM controller.	Yes	
14	19/7/22	Interface a DAC and generate Triangular and Square waveforms.	Yes	
16	2/8/22	Interface a 4x4 keyboard and display the key code on an LED.	Yes	
17	2/8/22	Demonstrate the use of an external interrupt to toggle an LED On/Off.	Yes	
18	9/8/22	Display the Hex digits 0 to F on a 7-segment LED interface, with an appropriate delay in between	Yes	
19	16/8/22	IA –2	Yes d14	

Dr. Charan K V
Staff in charge

Prof. Shanmuka Swamy G V
HOD- CSE

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PRINCIPAL
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ENGINEERING & TECHNOLOGY
TUMKUR - 572 106

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : IV (B3) Year:2021-22

Subject Title: MICROCONTROLLER AND EMBEDDED SYSTEMS LABORATORY	Subject Code: 18CSL48
Number of Contact Hours/Week 0:2:2 Total Number of Lab Contact Hours 36	Duration of Exam: 03 Hrs.
Total exam marks: 60	Total LA marks: 40
Lesson plan author: Dr. Charan K V	Date: 28/05/2022
Checked by: Prof. Shanmuka Swamy C V	Date: 28/05/2022

Objectives:

- Develop and test Program using ARM7TDMI/LPC2148.
- Conduct the experiments on an ARM7TDMI/LPC2148 evaluation board using evaluation version of Embedded 'C' & Keil Uvision-4 tool/compiler.

Outcomes:

- Develop and test program using ARM7TDMI/LPC2148.
- Conduct the following experiments on an ARM7TDMI/LPC2148 evaluation board using evaluation version of Embedded 'C' & Keil Uvision-4 tool/compiler.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	1/6/22	Write a program to multiply two 16 bit binary numbers.	Y	
2	8/6/22	Write a program to find the sum of first 10 integer numbers.	Y	
3	8/6/22	Write a program to find factorial of a number.	Y	
4	15/6/22	Write a program to create an activity with two buttons START and STOP.	Y	
5	15/6/22	Write a program to find the square of a number (1 to 10) using look-up table.	Y	
6	22/6/22	Write a program to find the largest/smallest number in an array of 32 numbers.	Y	
7	22/6/22	Write a program to arrange a series of 32 bit numbers in	Y	

		ascending/descending order.	Yes
8	29/6/22	Write a program to count the number of ones and zeros in two consecutive memory locations.	Yes
9	6/7/22	IA – 1	Yes 2/2
		PART – B	
10	6/7/22	Display "Hello World" message using Internal UART.	Yes
11	13/7/22	Interface and Control a DC Motor.	Yes
12	13/7/22	Interface a Stepper motor and rotate it in clockwise and anti-clockwise direction.	Yes
13	20/7/22	Determine Digital output for a given Analog input using Internal ADC of ARM controller.	Yes
14	20/7/22	Interface a DAC and generate Triangular and Square waveforms.	Yes
16	3/8/22	Interface a 4x4 keyboard and display the key code on an LCD.	Yes
17	3/8/22	Demonstrate the use of an external interrupt to toggle an LED On/Off.	Yes
18	10/8/22	Display the Hex digits 0 to F on a 7-segment LED interface, with an appropriate delay in between.	Yes
19	17/8/22	IA –2	Yes 2/2

Dr. Charan K V
Staff in charge

Prof. Shanmuka
HOD- CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2021 - JANUARY2022) MACROSCHEDULE

SUBJECT	**MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY**	**STAFF NAME**	**Mr. CHETHAN M S**
SUBJECT CODE	**18CS51**	**SEM/SEC**	**V 'A'**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)**

Course Outcomes or COs

CO1: Define management, organization, entrepreneur, planning ERP and outline their importance in entrepreneurship.

CO2: Utilize the resources available effectively through ERP.

CO3: Make use of IRPs and Institutional support in entrepreneurship.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	05.10.2021 to 27.10.2021	**Module- 1** Meaning, nature and characteristics of management, scope and Functional areas of management, goals of management, levels of management, brief overview of evolution of management theories, Planning- Nature, importance, types of plans, steps in planning. Organizing- nature and purpose, types of Organization, Staffing- meaning, process of recruitment and selection. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=WUYAiswiE4&list=PLavu2gn-9WXMf_ln5pMvxj0t43jzuf4-i https://www.youtube.com/watch?v=8XDsVhIEV2w&list=PLavu2gn-9WXMf_ln5pMvxj0t43jzuf4-i&index=2 https://www.youtube.com/watch?v=-VMjI_IbeUM&list=PLavu2gn-9WXMf_ln5pMvxj0t43jzuf4-i&index=6 https://www.youtube.com/watch?v=-VMjI_IbeUM&list=PLavu2gn-9WXMf_ln5pMvxj0t43jzuf4-i&index=6

2.	28.10.202 to 17.11.2021	**Module -2** Directing and controlling- meaning and nature of directing, leadership styles, motivation Theories, Communication- Meaning and importance, Coordination- meaning and importance, Controlling- meaning, steps in controlling, methods of establishing control. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=aIYEZPw0fgA&list=PLxxa2gp-9WXMf_bt5pMvxjfl4Jjm0-1&index=3 https://www.youtube.com/watch?v=8Xa6X8t0tvE&list=PLxxa2gp-9WXMf_bt5pMvxjfl4Jjm0-1&index=8 https://www.youtube.com/watch?v=0KiGnbwlmO0&list=PLxxa2gp-9WXMf_bt5pMvxjfl4Jjm0-1&index=10 https://www.youtube.com/watch?v=BYIbc4tDwLo&list=PLxxa2gp-9WXMf_bt5pMvxjfl4Jjm0-1&index=11
3.	23.11.2021 to 09.12.2021	**Module -3** Entrepreneur – meaning of entrepreneur, characteristics of entrepreneurs, classification and types of entrepreneurs, various stages in entrepreneurial process, role of entrepreneurs in economic development, entrepreneurship in India and barriers to entrepreneurship. Identification of business opportunities, market feasibility study, technical feasibility study, financial feasibility study and social feasibility study. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=aP346vouQOk https://www.youtube.com/watch?v=SwvLCF-U44g https://www.youtube.com/watch?v=X1iNzla2f20 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdP1DwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+Entrepreneurship&ots=g1qfshzDC8&sig=L4rbCtE42kSLE-r_gvsZ9Gf5xqY#v=onepage&q&f=false

4.	11.12.2021 to 04.01.2022	**Module -4** Preparation of project and ERP - meaning of project, project identification, project selection, project report, need and significance of project report, contents,formulation, guidelines by planning commission for project report, Enterprise Resource Planning: Meaning and Importance- ERP and Functional areas of Management – Marketing / Sales- Supply Chain Management – Finance and Accounting – Human Resources – Types of reports and methods of report generation. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=LkSZ6QBsQ8&list=PLRocO1kLnIQN7MmOBpfqOwv0n_t8vGJGt https://www.youtube.com/watch?v=YZf5q-fCBI https://www.youtube.com/watch?v=BBMNTUiC4w&list=PLJpGx4HbuvF02a57wtPCfTmvbJkTPFJPY https://www.cleartrip.com/articles/article.aspx?a=280386?&n=4
5.	05.01.2022 to 27.01.2022	**Module -5** Micro and Small Enterprises: Definition of micro and small enterprises, characteristics and advantages of micro and small enterprises, steps in establishing micro and small enterprises, Government of India indusial policy 2007 on micro and small enterprises, case study (Microsoft), Case study(Captain G R Gopinath),case study (N R Narayana Murthy & Infosys), Institutional support: MSME-DI, NSIC, SIDBI, KIADB, KSSIDC, TECSOK, KSFC, DIC and District level single window agency, Introduction to IPR. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=Am9SW1T_Qvs&list=PLaxu2go-9WXMf_Jn5pMvxjf043jzof4-i&index=17 https://www.youtube.com/watch?v=1f9OEAn3Uc2w&list=PLaxu2go-9WXMf_Jn5pMvxjf043jzof4-i&index=18 https://www.youtube.com/watch?v=fBsKuk2YmIc&list=PLaxu2gn-9WXMf_Jn5pMvxjf043jzof4-i&index=22 https://www.youtube.com/watch?v=s2AKMERnfBs&list=PLaxu2gn-9WXMf_Jn5pMvxjf043jzof4-i&index=24 https://www.youtube.com/watch?v=sNWnB3dZWzM&list=PLaxu2gn-9WXMf_Jn5pMvxjf043jzof4-i&index=26

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Na... Gowda
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2021 -JANUARY2022) MICROSCHEDULE

SUBJECT	**MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY**	**STAFF NAME**	**Mr. CHETHAN M S**
SUBJECT CODE	**18CS51**	**SEM/SEC**	**V 'A'**
IA Marks (CIE)	**40(Average of three tests for 30marks and 10marks for assignment)**	**Maximum Exam Marks (SEE)**	**60(Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)**

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	**Module 1:** **Introduction** -: Meaning, Nature and characteristics of Management	✓	
2	07/10/21	MON	Scope and functional areas of management,	✓	
3	09/10/21	SAT	Goals of Management, Levels of Management	✓	
4	12/10/21	TUE	brief overview of evolution of management theories	✓	
5	13/10/21	WED	Planning- Nature, importance,	✓	
6	16/10/21	SAT	types of plans, steps in planning,	✓	
7	19/10/21	TUE	Organizing- nature and purpose,	✓	
8	21/10/21	THU	types of Organization,	✓	
9	23/10/21	SAT	types of Organization continued…	✓	
10	26/10/21	TUE	Staffing- meaning,	✓	
11	27/10/21	WED	process of recruitment and selection	✓	

SUMMARY

PLANNED DATE	**FROM: 05.10.2021**	**TO:27.10.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 05/10/21	**TO:** 28/10/21	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 1	**TUTORIALS:** 1	**QP DISCUSSION:** ✓
	QUIZ: - ✓ -	**SEMINARS:** - ✓ -	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Tumkur - 572106
Principal

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	28/10/21	THU	**Module 2:** **Directing and controlling-**	Yes	
13	30/10/21	SAT	meaning and nature of directing	Yes	
14	02/11/21	TUE	leadership styles,	Yes	
15	04/11/21	THU	motivation Theories,	Yes	
16	06/11/21	SAT	Communication- Meaning and importance,	Yes	
17	09/11/21	TUE	Communication- Meaning and importance continued…..	Yes	
18	10/11/21	WED	Coordination meaning and importance,	Yes	
19	11/11/21	THU	Coordination meaning and importance continued…..	Yes	
20	13/11/21	SAT	Controlling- meaning,	Yes	
21	16/11/21	TUE	steps in controlling,	Yes	
22	17/11/21	WED	methods of establishing control.	Yes	

SUMMARY

PLANNED DATE	**FROM: 28.10.2021**	**TO: 17.11.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 28/10/21	**TO:** 17/11/21	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** Yes	**IA 2:** Yes	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S
Staff Incharge

Prof. C.V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SRI SIDDHARTHA INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572105.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	23/11/21	TUE	**Module 3:** **Entrepreneur** – meaning of entrepreneur,	✓	
24	24/11/21	WED	characteristics of entrepreneurs,	✓	
25	25/11/21	THU	classification and types of entrepreneurs,	✓	
26	27/11/21	SAT	various stages in entrepreneurial process,	✓	
27	30/11/21	TUE	role of entrepreneurs in economic development,	✓	
28	01/12/21	WED	Entrepreneurship in India and barriers to entrepreneurship	✓	
29	02/12/21	THU	Identification of business opportunities,	✓	
30	04/12/21	SAT	market feasibility study,	✓	
31	07/12/21	TUE	technical feasibility stud	✓	
32	08/12/21	WED	financial feasibility study and social feasibility study	✓	
33	09/12/21	THU	financial feasibility study and social feasibility study continued.....	✓	

SUMMARY

PLANNED DATE	FROM: 23.11.2021	TO:09.12.2021	
ACTUAL CLASSES TAKEN	FROM: 23/11/21	TO: 9/12/21	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 9	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	11/12/21	SAT	**Module 4:** **Preparation of project and ERP** - meaning of project,	Y	
35	14/12/21	TUE	project identification,	Y	
36	15/12/21	WED	project selection,	Y	
37	16/12/21	THU	project report, need and significance of project report,	Y	
38	18/12/21	SAT	contents, formulation,	Y	
39	21/12/21	TUE	guidelines by planning commission for project report,	Y	
40	22/12/21	WED	**Enterprise Resource Planning: Meaning and Importance- ERP**	Y	
41	23/12/21	THU	**ERP** and Functional areas of Management	Y	
42	30/12/21	THU	Marketing / Sales- Supply Chain Management, Finance and Accounting	Y	
43	01/01/22	SAT	Human Resources – Types of reports and methods of report generation	Y	
44	04/01/22	TUE	Human Resources – Types of reports and methods of report generation	Y	

SUMMARY

PLANNED DATE	FROM: 11.12.2021	TO: 04.01.2022	
ACTUAL CLASSES TAKEN	FROM: 11/12/21	TO: 4/1/22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2: Y	IA 3: Y
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION ✓
	QUIZ:	SEMINARS: ✓	ANY OTHER:

Mr. Chethan M S

Prof. C.Y. Shanmukaswamy

PRINCIPAL
SAHYADRI INSTITUTE OF ENGINEERING & TECHNOLOGY

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
45	05/01/22	WED	**Module 5:** **Micro and Small Enterprises:** Definition of micro and small enterprises,:	Yes	
46	06/01/22	THU	characteristics and advantages of micro and small enterprises,	Yes	
47	08/01/22	SAT	steps in establishing micro and small enterprises,	Yes	
48	11/01/22	TUE	Government of India industial policy 2007 on micro and small enterprises,	Yes	
49	12/01/22	WED	case study (Microsoft), Case study(Captain G R Gopinath)	Yes	
50	13/01/22	THU	Case study (N R Narayana Murthy & Infosys),	Yes	
51	15/01/22	SAT	**Institutional support:** MSME-DI, NSIC,	Yes	
52	18/01/22	TUE	SIDBI, KIADB, KSSIDC, TECSOK, KSFC,	Yes	
53	19/01/22	WED	DIC and District level single window agency,	Yes	
54	25/01/22	TUE	**Introduction to IPR.**	Yes	
55	27/01/22	THU	Patent acts and rules...	Yes	
56	27/01/22	THU	REVISION	Yes	

SUMMARY

PLANNED DATE	**FROM: 05.01.2022**	**TO: 27.01.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 5/1/22	**TO:** 27/1/22	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** Yes
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Chethan M S

Prof. C V Shanmukaswamy
HOD CSE

PRINCIPAL
DR. AMBEDKAR INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

RIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22) MACROSCHEDULE

SUBJECT	Computer Networks and Security	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS52	SEM/SEC	V (A)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Explain principles of application layer protocols.
- **CO2**:Recognize transport layer services and infer UDP and TCP protocols.
- **CO3**: Classify routers, IP and Routing Algorithms in network layer.
- **CO4**: Understand the Wireless and Mobile Networks covering IEEE 802.11 Standard.
- **CO5**: Describe Multimedia Networking and Network Management.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	04/10/21 to 25/10/21	**Module 1:** **Application Layer:** Principles of Network Applications: Network Application Architectures, Processes Communicating, Transport Services Available to Applications, Transport Services Provided by the Internet, Application-Layer Protocols, The Web and HTTP: Overview of HTTP, Non-persistent and Persistent Connections, HTTP Message Format, User-Server Interaction: Cookies, Web Caching, The Conditional GET, File Transfer: FTP Commands & Replies, Electronic Mail in the Internet: SMTP, Comparison with HTTP, Mail Message Format, Mail Access Protocols, DNS: The Internet's Directory Service: Services Provided by DNS, Overview of How DNS Works, DNS Records and Messages, Peer-to-Peer Applications: P2P File Distribution, Distributed Hash Tables, Socket Programming: creating Network Applications: Socket Programming with UDP, Socket Programming with TCP.	https://www.youtube.com/watch?v=9HAPZeG5bME&list=PLQNAnz9i8XKaZkBDbVJJ-G29xqTzx_0 https://www.youtube.com/watch?v=fcQVT9v5kbE&list=PLrjkTqDjmqIwEQvNhqIuus2gkxo8CXCmi https://www.youtube.com/watch?v=4wEUoUTgLEA&list=PLbAqDx2A0B-iGx39JB9mW6OW8bUM7W3S
2.	27/10/21 to	**Module 2:** **Transport Layer :** Introduction and Transport-Layer Services: Relationship Between Transport and Network Layers, Overview of the Transport Layer in the Internet, Multiplexing and Demultiplexing: Connectionless	https://www.youtube.com/watch?v=2BrZtWSvvHg https://www.youtube.com/watch?

	17/11/21	Transport: UDP:UDP Segment Structure, UDP Checksum, Principles of Reliable Data Transfer: Building a Reliable Data Transfer Protocol, Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat, Connection-Oriented Transport: TCP: The TCP Connection, TCP Segment Structure, RoundTrip Time Estimation and Timeout, Reliable Data Transfer, Flow Control, TCP Connection Management, Principles of Congestion Control: The Causes and the Costs of Congestion, Approaches to Congestion Control, Network-assisted congestion-control example, ATM ABR Congestion control, TCP Congestion Control: Fairness.	lC?v=YAEJFaYGm5 https://www.youtube.com/watch?v=PfEmE07S4hw
3.	24/11/21 to 09/12/21	**Module 3** **The Network layer**: What's Inside a Router?: Input Processing, Switching, Output Processing, Where Does Queuing Occur? Routing control plane, IPv6,A Brief foray into IP Security, Routing Algorithms: The Link-State (LS) Routing Algorithm, The Distance-Vector (DV) Routing Algorithm, Hierarchical Routing, Routing in the Internet, Intra-AS Routing in the Internet: RIP, Intra-AS Routing in the Internet: OSPF, Inter-AS Routing: BGP, Broadcast Routing Algorithms and Multicast.	https://www.youtube.com/watch?v=ARvQkvgI_NY https://www.youtube.com/watch?v=fM0pX3g9N3I https://www.youtube.com/watch?v=GQN10w5zKhE&list=PLrjkTgI3jnm8voGQyNhgdnm2gAoa8CXCm1
4.	10/12/21 to 30/12/21	**Module 4:** Network Security Overview of Network Security Elements of Network Security , Classification of Network Attacks Security Methods ,Symmetric-Key Cryptography :Data Encryption Standard (DES),Advanced Encryption Standard (AES) , Public-Key Cryptography :RSA Algorithm ,Diffie-Hellman Key-Exchange Protocol , Authentication :Hash Function , Secure Hash Algorithm (SHA) , Digital Signatures , Firewalls and Packet Filtering ,Packet Filtering , Proxy Server .	https://www.youtube.com/watch?v=5d8GRucKU3M https://www.youtube.com/watch?v=5d8GRucKU3M&list=PLrjkTgI3jnm8voGQyNhgdnm2gAoa8CXCm1 https://www.youtube.com/watch?v=IVB2u9hxI8&list=PLakt5W4Nbv31aBrJE1W56M8P9LRfbmZcN2b https://www.youtube.com/watch?v=oNlIrC2PqgI https://www.youtube.com/watch?v=Gc4mWmdBow

8.	31/12/21 to 31/1/22	**MODULE-5** Multimedia Networking: Properties of video, properties of Audio, Types of multimedia Network Applications, Streaming stored video: UDP Streaming, HTTP Streaming, Adaptive streaming and DASH, content distribution Networks Voice-over-IP :Limitations of the Best-Effort IP Service ,Removing Jitter at the Receiver for Audio ,Recovering from Packet Loss Protocols for Real-Time Conversational Applications , RTP , SIP	https://www.youtube.com/watch?v=DKChsiDB56c https://www.youtube.com/watch?v=xEx_JH40B2A https://www.youtube.com/watch?v=Lm3TBdKqYM&list=PLRxmmNn7pVtwe0B0Wsbj4A7U0DGcNBsby https://www.youtube.com/watch?v=_HBBNPc0_Og https://www.youtube.com/watch?v=HEP_sNb62k https://www.youtube.com/watch?v=_PfkBV8qDME https://www.youtube.com/watch?v=8LmbmB6NnsM

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HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
RIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22 Odd sem) MICRO SCHEDULE

SUBJECT	Computer Networks and Security	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS52	SEM/SECTION	V / A
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE I

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04/10/21	MON	Application Layer: Principles of Network Applications:	Covered	
2	06/10/21	WED	Network Application Architectures, Processes Communicating, Transport Services Available to Applications,	Covered	
3	07/10/21	THU	Transport Services Provided by the Internet, Application-Layer Protocols. The Web and HTTP:	Covered	
4	08/10/21	FRI	Overview of HTTP, Non-persistent and Persistent Connections, HTTP	Covered	
5	11/10/21	MON	Message Format, User-Server Interaction: Cookies, Web Caching, The Conditional GET, File Transfer: FTP Commands & Replies,	Covered	
6	13/10/21	WED	Electronic Mail in the Internet: SMTP, Comparison with HTTP, Mail Message Format, Mail Access Protocols, DNS:	Covered	
7	18/10/21	MON	The Internet's Directory Service: Services Provided by DNS.	Covered	
8	21/10/21	WED	Overview of How DNS Works, DNS Records and Messages, Peer-to-Peer Applications: P2P File Distribution,	Covered	
9	22/10/21	THU	Distributed Hash Tables, Socket Programming: creating,	Covered	
10	25/10/21	FRI	Network Applications: Socket Programming with UDP, Socket Programming with TCP	Covered	

SUMMARY

PLANNED DATE	**FROM:** 18/10/21	**TO:** 07/11/21	
ACTUAL CLASSES TAKEN	**FROM:** 20/10/21	**TO:** 25/10/21	
NUMBER OF CLASSES	**ALLOCATED:** 12	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 1	**TUTORIALS:** 1	**QP DISCUSSION:** ✓
	QUIZ: ✓	**SEMINARS:** ✓	**ANY OTHER:** ✓

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Nirmala Yaranal
Principal
PRINCIPAL
SIRSI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	27/10/21	WED	Transport Layer : Introduction and Transport-Layer Services:	Covered	
12	28/10/21	THU	Relationship Between Transport and Network Layers, Overview of the Transport Layer in the Internet,	Covered	
13	29/10/21	FRI	Multiplexing and Demultiplexing: Connectionless Transport: UDP,UDP Segment Structure, UDP Checksum,Principles of Reliable Data Transfer.	Covered	
14	04/11/21	THU	Building a Reliable Data Transfer Protocol, Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat,	Covered	
15	08/11/21	MON	Connection-Oriented Transport TCP: The TCP Connection, TCP Segment Structure, Round Trip Time Estimation and Timeout,	Covered	
16	10/11/21	WED	Reliable Data Transfer, Flow Control, TCP Connection Management, Principles of Congestion Control:	Covered	
17	11/11/21	THU	The Causes and the Costs of Congestion, Approaches to Congestion Control,	Covered	
18	12/11/21	FRI	Network-assisted congestion-control example,	Covered	
19	15/11/21	MON	ATM ABR Congestion control,	Covered	
20	17/11/21	WED	TCP Congestion Control: Fairness.	Covered	

SUMMARY

PLANNED DATE	FROM: 08/11/21	TO: 30/11/21	
ACTUAL CLASSES TAKEN	FROM: 08/11/21	TO: 30/11/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chitra K V
Staff Incharge

Prof. [illegible] Shivmurthaswamy
HOD, CSE

Dr. [illegible]
PRINCIPAL
RURAL INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	24/11/21	WED	The Network layer: What's Inside a Router?: Input Processing, Switching,	Covered	
22	25/11/21	THU	Output Processing, Where Does Queuing Occur? Routing control plane,	Covered	
23	26/11/21	FRI	IPv6,A Brief foray into IP Security, Routing Algorithms:	Covered	
24	29/11/21	MON	The Link-State (LS) Routing Algorithm,	Covered	
25	01/12/21	WED	The Distance-Vector (DV) Routing Algorithm.	Covered	
26	02/12/21	THU	Hierarchical Routing, Routing in the Internet, Intra-AS Routing in the Internet:	Covered	
27	03/12/21	FRI	RIP, Intra-AS Routing in the Internet: OSPF, Inter/AS Routing: BGP,	Covered	
28	06/12/21	MON	Broadcast Routing Algorithms	Covered	
29	08/12/21	WED	Multicast	Covered	
30	09/12/21	THU	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 01/12/21	TO: 19/12/21	
ACTUAL CLASSES TAKEN	FROM: 01/12/21	TO: 19/12/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shamukaraswamy
HOD, CSE

Dr. [illegible] Ayyanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	10/12/21	FRI	Network Security: Overview of Network Security:	Covered	
32	13/12/21	MON	Elements of Network Security , Classification of Network Attacks ,	Covered	
33	15/12/21	WED	Security Methods ,Symmetric-Key Cryptography :Data Encryption Standard (DES),	Covered	
34	16/12/21	THU	Advanced Encryption Standard (AES) , Public-Key Cryptography :	Covered	
35	17/12/21	FRI	RSA Algorithm ,Diffie-Hellman Key-Exchange Protocol ,	Covered	
36	20/12/21	MON	Authentication :Hash Function	Covered	
37	22/12/21	WED	Secure Hash Algorithm (SHA) , Digital Signatures , Firewalls and Packet Filtering.	Covered	
38	23/12/21	THU	Packet Filtering	Covered	
39	29/12/21	FRI	Proxy Server .	Covered	
40	30/12/21	THU	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 20/12/21	TO: 16/01/22	
ACTUAL CLASSES TAKEN	FROM: 20/12/21	TO: 16/01/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2: Yes	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shantakaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
BRINDAVAN INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	31/12/21	FRI	Multimedia Networking	Covered	
42	3/1/22	MON	Properties of video, properties of Audio, Types of multimedia	Covered	
43	5/1/22	WED	Network Applications, Streaming stored video: UDP Streaming,	Covered	
44	7/1/22	FRI	HTTP Streaming, Adaptive streaming and DASH,	Covered	
45	10/1/22	MON	content distribution Networks Voice-over-IP	Covered	
46	12/1/22	WED	Limitations of the Best-Effort IP Service Removing Jitter at the Receiver for Audio	Covered	
47	13/1/22	THU	Recovering from Packet Loss Protocols for Real-Time Conversational Applications	Covered	
48	17/1/22	MON	RTP , SIP	Covered	
49	19/1/22	WED	Continuation	Covered	
50	24/1/22	WED	Revision	Covered	
51	27/1/22	THU	Revision	Covered	
52	28/1/22	FRI	Revision	Covered	
53	31/1/22	MON	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 17/01/22	TO: 19/02/22	
ACTUAL CLASSES TAKEN	FROM: 17/01/22	TO: 19/02/22	
NUMBER OF CLASSES	ALLOCATED: 20	TAKEN: 20	
CONTENT COVERED FOR IA	IA 1:	IA 2: Yes	IA 3: Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Sharmila Aswathy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22) MACROSCHEDULE

SUBJECT	**Computer Networks and Security**	**STAFF NAME**	**Dr. Charan K V**
SUBJECT CODE	**18CS82**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- **CO1**: Explain principles of application layer protocols.
- **CO2**: Recognize transport layer services and infer UDP and TCP protocols.
- **CO3**: Classify routers, IP and Routing Algorithms in network layer.
- **CO4**: Understand the Wireless and Mobile Networks covering IEEE 802.11 Standard.
- **CO5**: Describe Multimedia Networking and Network Management.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	04.10.2021 to 07.11.2021	**Module 1:** **Application Layer:** Principles of Network Applications: Network Application Architectures, Processes Communicating, Transport Services Available to Applications, Transport Services Provided by the Internet, Application-Layer Protocols. The Web and HTTP: Overview of HTTP, Non-persistent and Persistent Connections, HTTP Message Format, User-Server Interaction: Cookies, Web Caching, The Conditional GET. File Transfer: FTP Commands & Replies, Electronic Mail in the Internet: SMTP, Comparison with HTTP, Mail Message Format, Mail Access Protocols. DNS: The Internet's Directory Service: Services Provided by DNS, Overview of How DNS Works, DNS Records and Messages. Peer-to-Peer Applications: P2P File Distribution, Distributed Hash Tables, Socket Programming: creating Network Applications: Socket Programming with UDP, Socket Programming with TCP.	https://www.youtube.com/watch?v=0IAPZzGSbME&list=PLBE9407rVIX8KBcPjAiVL0Z9tjXY0AlkV&index=1 https://www.youtube.com/watch?v=G0NYPcyjGeY&list=PLzQkTqKSmnfbvGQvNbcdmmDgkuoRCNCnd https://www.youtube.com/watch?v=mGkn0TgEE6A&list=PLrjwhaQyZAt8-1Gr2WBBnmWGWBtENfWW
2.	08.11.2021 to	**Module 2:** **Transport Layer :** Introduction and Transport-Layer Services: Relationship Between Transport and Network Layers, Overview of the Transport Layer in the Internet, Multiplexing and Demultiplexing: Connectionless	https://www.youtube.com/watch?v=2Rr2tW9zvRg https://www.youtube.com/watch

	30.11.2021	Transport: UDP,UDP Segment Structure, UDP Checksum, Principles of Reliable Data Transfer: Building a Reliable Data Transfer Protocol, Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat, Connection-Oriented Transport: TCP: The TCP Connection, TCP Segment Structure, RoundTrip Time Estimation and Timeout, Reliable Data Transfer, Flow Control, TCP Connection Management, Principles of Congestion Control: The Causes and the Costs of Congestion, Approaches to Congestion Control, Network-assisted congestion-control example, ATM ABR Congestion control, TCP Congestion Control: Fairness.	https://www.youtube.com/watch?v=YAE1FaYGetA https://www.youtube.com/watch?v=PfEmf0754hw
3.	**01.12.2021** **to** **19.12.2021**	**Module 3** **The Network layer**: What's Inside a Router?: Input Processing, Switching, Output Processing, Where Does Queuing Occur? Routing control plane, IPv6,A Brief foray into IP Security, Routing Algorithms: The Link-State (LS) Routing Algorithm, The Distance-Vector (DV) Routing Algorithm, Hierarchical Routing, Routing in the Internet, Intra-AS Routing in the Internet: RIP, Intra-AS Routing in the Internet: OSPF, Inter:AS Routing: BGP, Broadcast Routing Algorithms and Multicast.	https://www.youtube.com/watch?v=ARvQvgJ_-NY https://www.youtube.com/watch?v=BdQpN3qPNJI https://www.youtube.com/watch?v=GQNT0x5zKbE&list=PLrjkTqBjmnfwGQvNhaJmm2ckm8C8C8C#d
4.	**11.12.2021** **to** **01.01.2022**	**Module 4:** Network Security:Overview of Network Security:Elements of Network Security , Classification of Network Attacks ,Security Methods ,Symmetric-Key Cryptography :Data Encryption Standard (DES),Advanced Encryption Standard (AES) , Public-Key Cryptography ,RSA Algorithm ,Diffie-Hellman Key-Exchange Protocol , Authentication ,Hash Function , Secure Hash Algorithm (SHA) , Digital Signatures , Firewalls and Packet Filtering :Packet Filtering , Proxy Server .	https://www.youtube.com/watch?v=5dI8GBuzKU3M https://www.youtube.com/watch?v=5dI8GBuzKU3M&list=PLRJLDkhuOvE03NKbnu7ioNXVrAHo1dXb https://www.youtube.com/watch?v=IVR2x6HxB8&list=PLdo5W4Nhv31aBbEJWN4MR91R8bmZzAQbs https://www.youtube.com/watch?v=oNRbCP0rf https://www.youtube.com/watch?v=Gc4mWvmgIbw

8.	17.01.2022 to 19.02.2022	**MODULE-5** Multimedia Networking: Properties of video, properties of Audio, Types of multimedia Network Applications, Streaming stored video: UDP Streaming, HTTP Streaming, Adaptive streaming and DASH, content distribution Networks Voice-over-IP -Limitations of the Best-Effort IP Service ,Removing Jitter at the Receiver for Audio ,Recovering from Packet Loss Protocols for Real-Time Conversational Applications , RTP , SIP	https://www.youtube.com/watch?v=DKChsIDBN6c https://www.youtube.com/watch?v=sEv_H0B83A https://www.youtube.com/watch?v=Lm378g9CuYM&list=PLZsmsNn7pVtwcQRtWxJhGA7OhuGcNBnbv https://www.youtube.com/watch?v=3BBNPe0_Q6g https://www.youtube.com/watch?v=1FLP_cNb62k https://www.youtube.com/watch?v=P&RS9qIMRE https://www.youtube.com/watch?v=nLmhmB6NzcM

Dr. Channe K V
Staff Incharge

Prof. C Venkatnarayanswamy
HOD, CSE

Dr. Nagaraja Tanveer
Principal

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22 Odd sem) MICRO SCHEDULE

SUBJECT	Computer Networks and Security	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS52	SEM/SECTION	V / B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE I					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	4/10/21	MON	Application Layer: Principles of Network Applications:	Covered	
2	5/10/21	TUE	Network Application Architectures, Processes Communicating, Transport Services Available to Applications,	Covered	
3	6/10/21	WED	Transport Services Provided by the Internet, Application-Layer Protocols, The Web and HTTP:	Covered	
4	9/10/21	SAT	Overview of HTTP, Non-persistent and Persistent Connections, HTTP	Covered	
5	11/10/21	MON	Message Format, User-Server Interaction: Cookies, Web Caching, The Conditional GET, File Transfer: FTP Commands & Replies,	Covered	
6	12/10/21	TUE	Electronic Mail in the Internet: SMTP, Comparison with HTTP, Mail Message Format, Mail Access Protocols, DNS:	Covered	
7	13/10/21	WED	The Internet's Directory Service: Services Provided by DNS.	Covered	
8	16/10/21	SAT	Overview of How DNS Works, DNS Records and Messages, Peer-to-Peer Applications: P2P File Distribution,	Covered	
9	18/10/21	MON	Distributed Hash Tables, Socket Programming: creating,	Covered	
10	19/10/21	TUE	Network Applications: Socket Programming with UDP, Socket Programming with TCP	Covered	

SUMMARY

PLANNED DATE	**FROM:** 04/10/21	**TO:** 19/10/21	
ACTUAL CLASSES TAKEN	**FROM:** 04/10	**TO:** 19/10	
NUMBER OF CLASSES	**ALLOCATED:** 12	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:** 1	**QP DISCUSSION:** ✓
	QUIZ: NO	**SEMINARS:** NO	**ANY OTHER:**

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. [illegible] Vinayak
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE II

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	23/10/21	SAT	Transport Layer : Introduction and Transport-Layer Services:	Covered	
12	25/10/21	MON	Relationship Between Transport and Network Layers, Overview of the Transport Layer in the Internet,	Covered	
13	26/10/21	TUE	Multiplexing and Demultiplexing: Connectionless Transport: UDP,UDP Segment Structure, UDP Checksum, Principles of Reliable Data Transfer:	Covered	
14	27/10/21	WED	Building a Reliable Data Transfer Protocol, Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat,	Covered	
15	30/10/21	SAT	Connection-Oriented Transport: TCP: The TCP Connection, TCP Segment Structure, Round Trip Time Estimation and Timeout,	Covered	
16	2/11/21	TUE	Reliable Data Transfer, Flow Control, TCP Connection Management, Principles of Congestion Control:	Covered	
17	3/11/21	WED	The Causes and the Costs of Congestion, Approaches to Congestion Control,	Covered	
18	6/11/21	SAT	Network-assisted congestion-control example,	Covered	
19	8/11/21	MON	ATM ABR Congestion control,	Covered	
20	9/11/21	TUE	TCP Congestion Control: Fairness.	Covered	

SUMMARY

PLANNED DATE	FROM: 23/10/21	TO: 09/11/21	
ACTUAL CLASSES TAKEN	FROM: 25/10	TO: 29/11	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shivakumar Swamy
HOD, CSE

Dr. Narendra
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

MODULE III

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	10/11/21	WED	The Network layer: What's Inside a Router?: Input Processing, Switching.	Covered	
22	13/11/21	SAT	Output Processing, Where Does Queuing Occur? Routing control plane,	Covered	
23	15/11/21	MON	IPv6,A Brief foray into IP Security, Routing Algorithms:	Covered	
24	16/11/21	TUE	The Link-State (LS) Routing Algorithm,	Covered	
25	17/11/21	WED	The Distance-Vector (DV) Routing Algorithm.	Covered	
26	23/11/21	TUE	Hierarchical Routing, Routing in the Internet, Intra-AS Routing in the Internet:	Covered	
27	24/11/21	WED	RIP, Intra-AS Routing in the Internet: OSPF, Inter/AS Routing: BGP,	Covered	
28	27/11/21	SAT	Broadcast Routing Algorithms	Covered	
29	29/11/21	MON	Multicast	Covered	
30	30/11/21	TUE	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 10/11/21	TO: 30/11/21	
ACTUAL CLASSES TAKEN	FROM: 10/11	TO: 30/11	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Sharmila Kumary
HOD, CSE

PRINCIPAL
Dr. Channabasaveshwara Institute of Engineering & Technology
TUMKUR - 572 106
Principal

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	1/12/21	WED	Network Security: Overview of Network Security:	Covered	
32	4/12/21	SAT	Elements of Network Security Classification of Network Attacks ,	Covered	
33	6/12/21	MON	Security Methods ,Symmetric-Key Cryptography: Data Encryption Standard (DES),	Covered	
34	7/12/21	TUE	Advanced Encryption Standard (AES) , Public-Key Cryptography :	Covered	
35	8/12/21	WED	RSA Algorithm ,Diffie-Hellman Key-Exchange Protocol ,	Covered	
36	11/12/21	SAT	Authentication :Hash Function	Covered	
37	13/12/21	MON	Secure Hash Algorithm (SHA) , Digital Signatures , Firewalls and Packet Filtering:	Covered	
38	14/12/21	TUE	Packet Filtering	Covered	
39	15/12/21	WED	Proxy Server ,	Covered	
40	18/12/21	SAT	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 1/12/21	TO: 18/12/22	
ACTUAL CLASSES TAKEN	FROM: 1/12/21	TO: 18/12/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C [illegible]
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE V

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	20\12\21	MON	Multimedia Networking	Covered	
42	21\12\21	TUE	Properties of video, properties of Audio, Types of multimedia	Covered	
43	22\12\21	WED	Network Applications, Streaming stored video: UDP Streaming,	Covered	
44	25\12\21	SAT	HTTP Streaming, Adaptive streaming and DASH,	Covered	
45	1\01\22	SAT	content distribution Networks Voice-over-IP	covered	
46	3\01\22	MON	Limitations of the Best-Effort IP Service ,Removing Jitter at the Receiver for Audio	Covered	
47	4\01\22	TUE	Recovering from Packet Loss Protocols for Real-Time Conversational Applications	Covered	
48	5\01\22	WED	RTP , SIP	Covered	
49	8\01\22	SAT	Continuation	Covered	
50	10\01\22	MON	Revision	Covered	
51	11\01\22	TUE	Revision	Covered	
52	12\01\22	WED	Revision	Covered	
53	15\01\22	SAT	Revision	Covered	
54	17\01\22	MON	Revision	Covered	
55	18\01\22	TUE	Revision	Covered	
56	19\01\22	WED	Revision	Covered	
57	24\01\22	MON	Revision	Covered	
58	25\01\22	TUE	Revision	Covered	

59	26/01/22	WED	Revision	Covered	
60	29/01/22	SAT	Revision	Covered	
61	31/01/22	MON	Revision	Covered	

SUMMARY

PLANNED DATE	**FROM:** 20/01/22	**TO:** 31/01/22	
ACTUAL CLASSES TAKEN	**FROM:** 20/01/22	**TO:** 31/01/22	
NUMBER OF CLASSES	**ALLOCATED:** 20	**TAKEN:** 20	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Dr. Charan K V
Staff Incharge

Prof. C [redacted]aswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021– JAN 2022) MACRO SCHEDULE

SUBJECT	**DATABASE MANAGEMENT SYSTEM**	**STAFF NAME**	**RENUKARADHYA P C**
SUBJECT CODE	**18CS53**	**SEM/SEC**	**V/A**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

- Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
- Use Structured Query Language (SQL) for database manipulation
- Design and build simple database systems
- Develop application to interact with databases

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	04.10.2021 to 26.11.2021	**Module-1:** Introduction to Databases: Introduction, Characteristics of database approach, Advantages of using the DBMS approach, History of database applications. Overview of Database Languages and Architectures: Data Models, Schemas, and Instances. Three schema architecture and data independence, database languages, and interfaces, The Database System environment. Conceptual Data Modelling using Entities and Relationships: Entity types, Entity sets, attributes, roles, and structural constraints, Weak entity types, ER diagrams, examples, Specialization and Generalization **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Introduction+to+Databases
2	27.10.2021 to 17.11.2021	**Module-2** Relational Model: Relational Model Concepts, Relational Model Constraints and relational database schemas, Update operations, transactions, and dealing with constraint violations. Relational Algebra: Unary and Binary relational operations, additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra. Mapping Conceptual Design into a Logical Design: Relational Database Design using ER-to-Relational mapping. SQL: SQL data definition and data types, specifying constraints in SQL, retrieval queries in SQL, INSERT,	https://www.youtube.com/results?search_query=Relational+Model

		DELETE, and UPDATE statements in SQL., Additional features of SQL. **No. of Contact Sessions: 11**	
3	23.11.2021 to 09.12.2022	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries, Specifying constraints as assertions and action triggers, Views in SQL, Schema change statements in SQL. Database Application Development: Accessing databases from applications, An introduction to JDBC, JDBC classes and interfaces, SQLJ, Stored procedures, Case study: The internet Bookshop. Internet Applications: The three-Tier application architecture, The presentation layer, The Middle Tier **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=SQL
4	13.12.2021 to 04.01.2022	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies: Informal design guidelines for relation schema, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms, Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form, Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decompositions, Algorithms for Relational Database Schema Design, Nulls, Dangling tuples, and alternate Relational Designs, Further discussion of Multivalued dependencies and 4NF, Other dependencies and Normal Forms **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Normalization
5	05.01.2022 to 25.01.2022	**Module -5** Transaction Processing: Introduction to Transaction Processing, Transaction and System concepts, Desirable properties of Transactions, Characterizing schedules based on recoverability, Characterizing schedules based on Serializability, Transaction support in SQL. Concurrency Control in Databases: Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques, Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking. Introduction to Database Recovery Protocols: Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update, Recovery techniques based on immediate update, Shadow paging, Database backup and recovery from catastrophic failures **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Transaction+Processing

TEXT BOOKS:

1. **Fundamentals of Database Systems, Ramez Elmasri and Shamkant B. Navathe, 7th Edition, 2017.**
2. **Pearson. 2. Database management systems, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill**

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.

2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design, Implementation and Management, Cengage Learning 2012.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 - JAN 2022) MICRO SCHEDULE

SUBJECT	DATABASE MANAGEMENT SYSTEM	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS53	SEM/SEC	V, "A & B"
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04-10-21	MON	**Module-1:** Introduction to Databases: Introduction,	Covered	
2	05-10-21	TUE	Characteristics of database approach, Advantages of using the DBMS approach,	Covered	
3	07-10-21	WED	History of database applications. Overview of Database Languages and Architectures	Covered	
4	11-10-21	THU	Data Models, Schemas, and Instances	Covered	
5	12-10-21	MON	Three schema architecture and data independence,	Covered	
6	13-10-21	TUE	database languages, and interfaces,	Covered	
7	18-10-21	WED	The Database System environment.	Covered	
8	19-10-21	THU	Conceptual Data Modelling using Entities and Relationships:	Covered	
9	21-10-21	MON	Entity types, Entity sets, attributes, roles, and structural constraints,	Covered	
10	25-10-21	TUE	Weak entity types, ER diagrams	Covered	
11	26-10-21	WED	examples, Specialization and Generalization	Covered	

SUMMARY

PLANNED DATE	FROM: 04-10-21	TO: 26-10-21
ACTUAL CLASSES TAKEN	FROM: 4-10-21	TO: 26-10-21
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13

CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: 1/2
	QUIZ: NO	SEMINARS: NO	ANY OTHER: —

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	27-10-21	THU	Relational Model: Relational Model Concepts,	Covered	
13	28-10-21	MON	Relational Model Constraints and relational database schemas	Covered	
14	02-11-21	TUE	Update operations, transactions, and dealing with constraint violations.	Covered	
15	04-11-21	WED	Relational Algebra: Unary and Binary relational operations	Covered	
16	08-11-21	THU	additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra	Covered	
17	09-11-21	MON	Mapping Conceptual Design into a Logical Design	Covered	
18	10-11-21	TUE	Relational Database Design using ER-to-Relational mapping.	Covered	
19	11-11-21	WED	SQL: SQL data definition and data types, specifying constraints in SQL	Covered	
20	15-11-21	THU	retrieval queries in SQL, INSERT,	Covered	
21	16-11-21	MON	DELETE, and UPDATE statements in SQL	Covered	
22	17-11-21	TUE	Additional features of SQL.	Covered	

SUMMARY

PLANNED DATE	FROM: 27.11.2021	TO: 17.11.2021	
ACTUAL CLASSES TAKEN	FROM: 22/11/21	TO: 12/11/21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:

VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION:
	QUIZ: —	SEMINARS: —	ANY OTHER:

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MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	23-11-21	WED	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries,	Covered	
24	24-11-21	THU	Specifying constraints as assertions and action triggers,	Covered	
25	25-11-21	MON	Views in SQL, Schema change statements in SQL.	Covered	
26	29-11-21	TUE	Database Application Development:,	Covered	
27	30-11-21	WED	Accessing databases from applications	Covered	
28	01-12-21	THU	An introduction to JDBC,	Covered	
29	02-12-21	MON	JDBC classes and interfaces,	Covered	
30	06-12-21	TUE	SQLJ, Stored procedures, Case study:	Covered	
31	07-12-21	WED	The internet Bookshop, Internet Applications:	Covered	
32	08-12-21	THU	The three-Tier application architecture,	Covered	
33	09-12-21	MON	The presentation layer, The Middle Tier	Covered	

SUMMARY

PLANNED DATE	FROM: 23.11.2021	TO: 09.12.2022	
ACTUAL CLASSES TAKEN	FROM: 23/11/21	TO: 9/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:

VALUE ADDITION TO THE MODULE	ASSIGNMENTS: \	TUTORIALS: \	QP DISCUSSION:
	QUIZ: —	SEMINARS: —	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	13-12-21	MON	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies		
35	14-12-21	TUE	Informal design guidelines for relation schema, Functional Dependeocies		
36	15-12-21	WED	Normal Forms based on Primary Keys, Second and Third Normal Forms,		
37	16-12-21	THU	Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form,		
38	20-12-21	MON	Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules,		
39	21-12-21	TUE	Equivalence, and Minimal Cover, Properties of Relational Decompositions,		
40	22-12-21	WED	Algorithms for Relational Database Schema Design		
41	23-12-21	THU	Nulls, Dangling tuples,		
42	30-12-21	MON	alternate Relational Designs		
43	03-01-22	TUE	Further discussion of Multivalued dependencies and 4NF		
44	04-01-22	WED	Other dependencies and Normal Forms		

SUMMARY

PLANNED DATE	FROM: 13.12.2021	TO: 04.01.2022

ACTUAL CLASSES TAKEN	FROM: 13/12/21	TO: 5/1/22	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION:
	QUIZ: —	SEMINARS: —	ANY OTHER:

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MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	05-01-22	MON	**Module -5** Transaction Processing: Introduction to Transaction Processing,	Covered	
46	06-01-22	TUE	Transaction and System concepts, Desirable properties of Transactions,	Covered	
47	10-01-22	WED	Characterizing schedules based on recoverability, Characterizing schedules based on Serializability	Covered	
48	11-01-22	THU	Transaction support in SQL. Concurrency Control in Databases	Covered	
49	12-01-22	MON	Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering,	Covered	
50	13-01-22	TUE	Multiversion Concurrency control techniques, Validation Concurrency control techniques,	Covered	
51	17-01-22	WED	Granularity of Data items and Multiple Granularity Locking	Covered	
52	18-01-22	THU	Introduction to Database Recovery Protocols: Recovery Concepts,	Covered	
53	19-01-22	MON	NO-UNDO/REDO recovery based on Deferred update,	Covered	
54	24-01-22	TUE	Recovery techniques based on immediate update,	Covered	

55	25-01-22	WED	Shadow paging, Database backup and recovery from catastrophic failures	Covered	

SUMMARY

PLANNED DATE	**FROM: 05.01.2022**	**TO: 25.01.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 5/1/22	**TO:** 25/1/22	
NUMBER OF CLASSES	**ALLOCATED: 14**	**TAKEN:** 14	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 1	**TUTORIALS:** 1	**QP DISCUSSION:**
	QUIZ: —	**SEMINARS:**	**ANY OTHER:**

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021– JAN 2022) MACRO SCHEDULE

SUBJECT	DATABASE MANAGEMENT SYSTEM	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS53	SEM/SEC	V/[redacted]
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
- Use Structured Query Language (SQL) for database manipulation
- Design and build simple database systems
- Develop application to interact with databases

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	04.10.2021 to 26.11.2021	**Module-1:** Introduction to Databases: Introduction, Characteristics of database approach, Advantages of using the DBMS approach, History of database applications. Overview of Database Languages and Architectures: Data Models, Schemas, and Instances. Three schema architecture and data independence, database languages, and interfaces, The Database System environment. Conceptual Data Modelling using Entities and Relationships: Entity types, Entity sets, attributes, roles, and structural constraints, Weak entity types, ER diagrams, examples, Specialization and Generalization **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Introduction+to+Databases
2	27.10.2021 to 17.11.2021	**Module-2** Relational Model: Relational Model Concepts, Relational Model Constraints and relational database schemas, Update operations, transactions, and dealing with constraint violations. Relational Algebra: Unary and Binary relational operations, additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra. Mapping Conceptual Design into a Logical Design: Relational Database Design using ER-to-Relational mapping. SQL: SQL data definition and data types, specifying constraints in SQL, retrieval queries in SQL, INSERT	https://www.youtube.com/results?search_query=Relational+Model

		DELETE, and UPDATE statements in SQL, Additional features of SQL. **No. of Contact Sessions: 11**	
3	**23.11.2021 to 09.12.2021**	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries, Specifying constraints as assertions and action triggers, Views in SQL, Schema change statements in SQL. Database Application Development: Accessing databases from applications, An introduction to JDBC, JDBC classes and interfaces, SQLJ, Stored procedures, Case study: The internet Bookshop. Internet Applications: The three-Tier application architecture, The presentation layer, The Middle Tier **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=SQL
4	**13.12.2021 to 04.01.2022**	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies: Informal design guidelines for relation schema, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms, Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form, Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decompositions, Algorithms for Relational Database Schema Design, Nulls, Dangling tuples, and alternate Relational Designs, Further discussion of Multivalued dependencies and 4NF, Other dependencies and Normal Forms **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Normalization
5	**05.01.2022 to 25.01.2022**	**Module -5** Transaction Processing: Introduction to Transaction Processing, Transaction and System concepts, Desirable properties of Transactions, Characterizing schedules based on recoverability, Characterizing schedules based on Serializability, Transaction support in SQL. Concurrency Control in Databases: Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques, Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking. Introduction to Database Recovery Protocols: Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update, Recovery techniques based on immediate update, Shadow paging, Database backup and recovery from catastrophic failures **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Transactio+Processing

TEXT BOOKS:

1. **Fundamentals of Database Systems, Ramez Elmasri and Shamkant B. Navathe, 7th Edition, 2017,**
2. **Pearson. 2. Database management systems, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill**

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.

2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design, Implementation and Management, Cengage Learning 2012.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 - JAN 2022) MICRO SCHEDULE

SUBJECT	DATABASE MANAGEMENT SYSTEM	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS53	SEM/SEC	V 'B'
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04-10-21	MON	**Module-1:** Introduction to Databases: Introduction,	Covered	
2	05-10-21	TUE	Characteristics of database approach, Advantages of using the DBMS approach,	Covered	
3	07-10-21	WED	History of database applications. Overview of Database Languages and Architectures	Covered	
4	11-10-21	THU	Data Models, Schemas, and Instances	Covered	
5	12-10-21	MON	Three schema architecture and data independence,	Covered	
6	13-10-21	TUE	database languages, and interfaces,	Covered	
7	18-10-21	WED	The Database System environment.	Covered	
8	19-10-21	THU	Conceptual Data Modelling using Entities and Relationships:	Covered	
9	21-10-21	MON	Entity types, Entity sets, attributes, roles, and structural constraints,	Covered	
10	25-10-21	TUE	Weak entity types, ER diagrams	Covered	
11	26-10-21	WED	examples, Specialization and Generalization	Covered	

SUMMARY

PLANNED DATE	FROM: 04-10-21	TO: 26-10-21	
ACTUAL CLASSES TAKEN	FROM: 1|10|21	TO: 26|10|21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓

	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	27-10-21	THU	Relational Model: Relational Model Concepts,	Covered	
13	28-10-21	MON	Relational Model Constraints and relational database schemas	Covered	
14	02-11-21	TUE	Update operations, transactions, and dealing with constraint violations.	Covered	
15	04-11-21	WED	Relational Algebra: Unary and Binary relational operations	Covered	
16	08-11-21	THU	additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra	Covered	
17	09-11-21	MON	Mapping Conceptual Design into a Logical Design	Covered	
18	10-11-21	TUE	Relational Database Design using ER-to-Relational mapping	Covered	
19	11-11-21	WED	SQL: SQL data definition and data types, specifying constraints in SQL	Covered	
20	15-11-21	THU	retrieval queries in SQL, INSERT,	Covered	
21	16-11-21	MON	DELETE, and UPDATE statements in SQL	Covered	
22	17-11-21	TUE	Additional features of SQL	Covered	

SUMMARY

PLANNED DATE	FROM: 27.11.2021	TO: 17.11.2021	
ACTUAL CLASSES TAKEN	FROM: 27/11/21	TO: 17/11/21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
23	23-11-21	WED	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries,	Covered	
24	24-11-21	THU	Specifying constraints as assertions and action triggers,	Covered	
25	25-11-21	MON	Views in SQL, Schema change statements in SQL.	Covered	
26	29-11-21	TUE	Database Application Development:,	Covered	
27	30-11-21	WED	Accessing databases from applications	Covered	
28	01-12-21	THU	An introduction to JDBC,	Covered	
29	02-12-21	MON	JDBC classes and interfaces,	Covered	
30	06-12-21	TUE	SQLJ, Stored procedures, Case study:	Covered	
31	07-12-21	WED	The internet Bookshop. Internet Applications:	Covered	
32	08-12-21	THU	The three-Tier application architecture,	Covered	
33	09-12-21	MON	The presentation layer, The Middle Tier	Covered	

SUMMARY

PLANNED DATE	**FROM: 23.11.2021**	**TO: 09.12.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 23/11/21	**TO:** 09/12/21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** ✓	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
34	13-12-21	MON	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies	Covered	
35	14-12-21	TUE	Informal design guidelines for relation schema, Functional Dependencies	Covered	
36	15-12-21	WED	Normal Forms based on Primary Keys, Second and Third Normal Forms,	Covered	
37	16-12-21	THU	Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form,	Covered	
38	20-12-21	MON	Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules,	Covered	
39	21-12-21	TUE	Equivalence, and Minimal Cover, Properties of Relational Decompositions,	Covered	
40	22-12-21	WED	Algorithms for Relational Database Schema Design	Covered	
41	23-12-21	THU	Nulls, Dangling tuples,	Covered	
42	30-12-21	MON	alternate Relational Designs	Covered	
43	03-01-22	TUE	Further discussion of Multivalued dependencies and 4NF	Covered	
44	04-01-22	WED	Other dependencies and Normal Forms	Covered	

SUMMARY

PLANNED DATE	**FROM: 13.12.2021**	**TO: 04.01.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 13/12/21	**TO:** 4/1/22	
NUMBER OF CLASSES	**ALLOCATED: 13**	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** ✓	**QP DISCUSSIONS** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	05-01-22	MON	**Module -5** Transaction Processing: Introduction to Transaction Processing,	Covered	
46	06-01-22	TUE	Transaction and System concepts, Desirable properties of Transactions,	Covered	
47	10-01-22	WED	Characterizing schedules based on recoverability, Characterizing schedules based on Serializability	Covered	
48	11-01-22	THU	Transaction support in SQL. Concurrency Control in Databases	Covered	
49	12-01-22	MON	Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering,	Covered	
50	13-01-22	TUE	Multiversion Concurrency control techniques, Validation Concurrency control techniques,	Covered	
51	17-01-22	WED	Granularity of Data items and Multiple Granularity Locking	Covered	
52	18-01-22	THU	Introduction to Database Recovery Protocols: Recovery Concepts,	Covered	
53	19-01-22	MON	NO-UNDO/REDO recovery based on Deferred update,	Covered	
54	24-01-22	TUE	Recovery techniques based on immediate update,	Covered	
55	25-01-22	WED	Shadow paging, Database backup and recovery from catastrophic failures	Covered	

SUMMARY

PLANNED DATE	**FROM: 05.01.2022**	**TO: 25.01.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 5/1/22	**TO:** 25/1/22	
NUMBER OF CLASSES	**ALLOCATED: 14**	**TAKEN:** 14	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓

VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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LESSON PLAN (FEB -JUNE 2022) MACRO SCHEDULE

SUBJECT	ATC	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS54	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Demonstrate need for ATC and different types of OS
- Discuss suitable techniques for management of different ATC techniques
- Illustrate DFA, NFA, NDFA for different applicable applications
- Explain the different concepts of ATC in platform of usage through case studies

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	05.10.2021 to 23.10.2021	**Module- 1:** Why study the Theory of Computation, Languages and Strings: Strings, Languages. A Language Hierarchy, Computation, Finite State Machines (FSM): Deterministic FSM, Regular languages, Designing FSM, Nondeterministic FSMs, From FSMs to Operational Systems, Simulators for FSMs, Minimizing FSMs, Canonical form of Regular languages, Finite State Transducers, Bidirectional Transducers. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=RnnnWzfT9M https://www.youtube.com/watch?v=nfGuRmIbwos&list=PLrjkTnlSiuu9UI9PePQWQGJGSMJw8Fv- https://www.youtube.com/watch?v=TAk822We4s4 https://www.youtube.com/watch?v=tWPs-rZGM8 https://www.youtube.com/watch?v=5aI-vABWECs
2	26.10.2021 to 11.011.2021	**Module -2** Regular Expressions (RE): what is a RE?, Kleene"s theorem, Applications of REs, Manipulating and Simplifying REs. Regular Grammars: Definition, Regular Grammars and Regular languages. Regular Languages (RL) and Non-regular Languages: How many RLs, To show that a language is regular, Closure properties of RLs, to show some languages are not RLs. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=TE7YtIrf4h https://www.youtube.com/watch?v=AIVKIdGbrEU&list=PLJYBeNdwSdW_HbvqpTADFKBtbwuJXedE https://www.youtube.com/watch?v=usOJVCbcZIg
3		**Module -3:** Context-Free Grammars(CFG): Introduction to Rewrite Systems and Grammars, CFGs and languages, designing	https://www.youtube.com/results?search_query=Deadlocks%3Bs+System+model

	12.11.2021 **to** **02.12.2021**	CFGs, simplifying CFGs, proving that a Grammar is correct, Derivation and Parse trees, Ambiguity, Normal Forms. Pushdown Automata (PDA): Definition of non-deterministic PDA, Deterministic and Non-deterministic PDAs, Nondeterminism and Halting, alternative equivalent definitions of a PDA, alternatives that are not equivalent to PDA. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=EVmw-ZN9g0 https://www.youtube.com/results?search_query=Memory+management+strategies%3A+Background%3B+Swapping%3B+
4	**04.12.2021** **to** **21.12.2021**	**Module –4** Algorithms and Decision Procedures for CFLs: Decidable questions, Un-decidable questions. Turing Machine: Turing machine model, Representation, Language acceptability by TM, design of TM, Techniques for TM construction. Variants of Turing Machines (TM), The model of Linear Bounded automata. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=NPhcw6sYZd8 https://www.youtube.com/watch?v=sRUg_ssG5f0 https://www.youtube.com/watch?v=8Rc9AbqHUc https://www.youtube.com/watch?v=2Mlag5mkBbM&list=PLeb0vPBUh6KgGGRelu7eMwYkBTbe-UC1
5	**01.01.2022** **to** **25.01.2022**	**Module -5** Decidability: Definition of an algorithm, decidability, decidable languages, Undecidable languages, halting problem of TM, Post correspondence problem. Complexity: Growth rate 08 of functions, the classes of P and NP, Quantum Computation: quantum computers, ChurchTuring thesis. Applications: G.1 Defining syntax of programming language. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=YcBd3WMbNaE https://www.youtube.com/watch?v=Ja9EaFYi66I https://www.youtube.com/watch?v=D6D3nR8CnLE https://www.youtube.com/watch?v=-D6Gzm9UgY

TEXT BOOKS:

1. Elaine Rich, Automata, Computability and Complexity, 1st Edition, Pearson education,2012/2013 2. K L P Mishra, N Chandrasekaran , 3rd Edition, Theory of Computer Science, Phl, 2012

REFERENCE BOOKS:

1. John E Hopcroft, Rajeev Motwani, Jeffery D Ullman, Introduction to AutomataTheory, Languages, and Computation, 3rd Edition, Pearson Education, 2013

2. Michael Sipser : Introduction to the Theory of Computation, 3rd edition, Cengage learning,2013

3. John C Martin, Introduction to Languages and The Theory of Computation, 3rd Edition, Tata McGraw – Hill Publishing Company Limited, 2013

4. Peter Linz, "An Introduction to Formal Languages and Automata", 3rd Edition, Narosa Publishers, 1998

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCT -FEB 2022) MICROSCHEDULE

SUBJECT	ATC	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS54	SEM/SEC	V (A)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	**Why study the Theory of Computation, Languages and Strings**: Strings, Languages.	Covered	
2	01/10/21	WED	A Language Hierarchy, Computation,	Covered	
3	08/10/21	THU	**Finite State Machines (FSM)**: Deterministic FSM,	Covered	
4	09/10/21	FRI	Regular languages,	Covered	
5	12/10/21	SAT	Designing FSM, Nondeterministic FSMs,	Covered	
6	13/10/21	TUE	From FSMs to Operational Systems, Simulators forFSMs,	Covered	
7	16/10/21	THU	Minimizing FSMs,	Covered	
8	19/10/21	FRI	Canonical form of Regular languages,	Covered	
9	21/10/21	MON	Canonical form of Regular languages,	Covered	
10	23/10/21	TUE	Bidirectional Transducers.	Covered	

SUMMARY

PLANNED DATE	FROM: 5.10.2021	TO: 23.10.2021	
ACTUAL CLASSES TAKEN	FROM: 5.10.2021	TO: 23.10.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M

Dr. Suhas G K
HOD-ISE

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	26/10/21	FRI	what is a RE?	Covered	
12	27/10/21	THU	Kleene"s theorem	Covered	
13	28/10/21	MON	Applications of REs	Covered	
14	29/10/21	TUE	Manipulating and Simplifying REs	Covered	
15	02/11/21	THU	Regular Grammars: Definition, Regular Grammars and Regular languages.	Covered	
16	04/11/21	FRI	Regular Languages (RL) and Non-regular Languages:	Covered	
17	06/11/21	MON	How many RLs	Covered	
18	09/11/21	TUE	To show that a language is regular	Covered	
19	10/11/21	THU	Closure properties of RLs	Covered	
20	11/11/21	FRI	to show some languages are not RLs.	Covered	

SUMMARY

PLANNED DATE	FROM: 26.10.2021	TO: 11.11.2021	
ACTUAL CLASSES TAKEN	FROM: 26.10.2021	TO: 11.11.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

PRINCIPAL
Principal

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	12/11/21	MON	Introduction to Rewrite Systems and Grammars	Covered	
22	13/11/21	TUE	CFGs and languages	Covered	
23	16/11/21	THU	designing CFGs	Covered	
24	17/11/21	TUE	simplifying CFGs	Covered	
25	24/11/21	THU	proving that a Grammar is correct	Covered	
26	25/11/21	FRI	Derivation and Parse trees	Covered	
27	27/11/21	MON	Ambiguity, Normal Forms	Covered	
28	30/11/21	TUE	Pushdown Automata (PDA): Definition of non-deterministic PDA, Deterministic and Non-deterministic PDAs	Covered	
29	01/12/21	THU	Nondeterminism and Halting	Covered	
30	02/12/21	FRI	alternative equivalent definitions of a PDA, alternatives that are not equivalent to PDA	Covered	

SUMMARY

PLANNED DATE	FROM: 12.11.2021	TO: 02.12.2021	
ACTUAL CLASSES TAKEN	FROM: 12.11.2021	TO: 02.12.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	04/12/21	MON	**Algorithms and Decision Procedures for CFLs:**	Covered	
32	07/12/21	TUE	Decidable questions	Covered	
33	08/12/21	THU	Un-decidable questions	Covered	
34	09/12/21	THU	**Turing Machine**: Turing machine model.	Covered	
35	10/12/21	THU	Representation	Covered	
36	11/12/21	FRI	Language acceptability by TM	Covered	
37	16/12/21	MON	design of TM	Covered	
38	17/12/21	TUE	Techniques for TM construction	Covered	
39	18/12/21	THU	Variants of Turing Machines (TM)	Covered	
40	21/12/21	TUE	The model of Linear Bounded automata.	Covered	

SUMMARY

PLANNED DATE	**FROM: 04.12.2021**	**TO: 21.12.2021**	
ACTUAL CLASSES TAKEN	**FROM: 04.12.2021**	**TO: 21.12.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal

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TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	01/01/22	THU	Definition of an algorithm.	Covered	
42	04/01/22	MON	decidability	Covered	
43	05/01/22	TUE	decidable languages	Covered	
44	07/01/22	THU	Undecidable languages	Covered	
45	08/01/22	FRI	Rhahing problem of TM	Covered	
46	11/01/22	MON	Post correspondence problem	Covered	
47	12/01/22	TUE	Complexity: Growth rate 0&of functions	Covered	
48	13/01/22	THU	the classes of P and NP	Covered	
49	15/01/22	FRI	Quantum Computation: quantum computers	Covered	
50	18/01/22	MON	ChurchTuring thesis	Covered	
51	19/01/22	TUE	**Applications:** G.1 Defining syntax of programming language.	Covered	
52	25/01/22	WED	Appendix J: Security	Covered	

SUMMARY

PLANNED DATE	**FROM: 01.01.2022**	**TO: 25.01.2022**	
ACTUAL CLASSES TAKEN	**FROM: 01.01.2022**	**TO: 25.01.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

20-21 (Even) VI

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SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-AUG 2021) MICROSCHEDULE

EVEN 20-21

SUBJECT	OBJECT-ORIENTED MODELING AND DESIGN	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS64	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	**Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation?	Covered	
2	20/04/21	TUE	OO Themes; Evidence for usefulness of OO development; OO modelling history.	covered	
3	23/04/21	FRI	Modelling as Design technique:	Covered	
4	24/04/21	SAT	The Three models. Class Modelling:	Covered	
5	26/04/21	MON	Link and associations concepts;	Covered	
6	27/04/21	TUE	A sample class model; Navigation of class models; Advanced Class Modelling,	Covered	
7	30/04/21	FRI	Advanced object and class concepts; Association ends;	Covered	
8	03/05/21	MON	N-ary associations; Aggregation; Abstract classes;	Covered	
9	04/05/21	TUE	Multiple inheritance;	covered	
10	07/05/21	FRI	Metadata; Reification;	Covered	
11	08/05/21	SAT	Constraints; Derived Data; Packages	Covered	
12	10/05/21	MON	Question papers solvation	Covered	

SUMMARY

PLANNED DATE	FROM: 19.04.2021	TO: 10.05.2021	
ACTUAL CLASSES TAKEN	FROM: 19.04.2021	TO: 10.05.2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C.V. Shanmukha Swamy
HOD, CSE

Dr. Narendra Viswanath
Principal

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	11/05/21	TUE	**Module – 2:**UseCaseModelling and Detailed Requirements	Covered	
14	15/05/21	SAT	Overview; Detailed objectoriented Requirements definitions	Covered	
15	17/05/21	MON	System Processes-A use case/Scenario view	Covered	
16	18/05/21	TUE	Identifying Input and outputs-The System sequence diagram	Covered	
17	21/05/21	FRI	Identifying Input and outputs-The System sequence diagram cont....	Covered	
18	22/05/21	SAT	Identifying Object Behaviour-	Covered	
19	24/05/21	MON	Identifying Object Behaviourcont....	Covered	
20	25/05/21	TUE	The System sequence diagram	Covered	
21	31/05/21	MON	The System sequence diagram cont.	Covered	
22	01/05/21	TUE	The state chart Diagram.	Covered	
23	04/06/21	FRI	Integrated Object-oriented Models.	Covered	
24	05/06/21	SAT	Question papers solvation.	Covered	

SUMMARY

PLANNED DATE	**FROM: 11.05.2021**	**TO: 05.06.2021**	
ACTUAL CLASSES TAKEN	**FROM:** 11.05.2021	**TO:** 05.06.2021	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE
HOD
COMPUTER SCIENCE & ENGG.

Dr. Nagendra Viswanath
Principal

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	07/06/21	MON	Module – 3: Process Overview	covered	
25	08/06/21	TUE	System Conception and Domain Analysis	covered	
26	11/06/21	FRI	Process Overview: Development stages;	covered	
27	12/06/21	SAT	Development life Cycle	covered	
28	11/06/21	FRI	System Conception: Devising a system concept;	covered	
29	12/06/21	SAT	Elaborating a concept; preparing a problem statement	covered	
30	14/06/21	MON	Domain Analysis.	covered	
31	15/06/21	TUE	Overview of analysis.	covered	
32	18/06/21	FRI	Domain interaction model Iterating the analysis.	covered	
33	19/06/21	SAT	Domain Class model.	covered	
34	21/06/21	MON	Domain state model.	covered	
35	22/06/21	TUE	Question papers solvation.	covered	

SUMMARY

PLANNED DATE	FROM: 07.06.2021	TO:22.06.2021	
ACTUAL CLASSES TAKEN	FROM: 7.6.2021	TO: 24.6.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C.V Shambukaswamy
HOD
COMPUTER SCIENCE & ENGG.
S.I.E.T. TUMAKURU-05.

PRINCIPAL
Dr. Narendra Viswanath
Principal

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	25/06/21	FRI	Module – 4: Use case Realization :The Design Discipline within up iterations:	Covered	
37	26/06/21	SAT	Object Oriented Design-The Bridge between Requirements and Implementation	Covered	
38	02/07/21	FRI	Object Oriented Design-The Bridge between Requirements and Implementation cont....	Covered	
39	03/07/21	SAT	Design Classes and Design within Class Diagrams;	Covered	
40	05/07/21	MON	Interaction Diagrams-Realizing Use Case and defining methods;	Covered	
41	06/07/21	TUE	Designing with Communication Diagrams	Covered	
42	09/07/21	FRI	Updating the Design Class Diagram;	Covered	
43	10/07/21	SAT	Package Diagrams-Structuring the Major Components;	Covered	
44	12/07/21	MON	Implementation Issues for Three-Layer Design.	Covered	
45	13/07/21	TUE	The DesignDiscipline within up iterations.	Covered	
46	16/07/21	FRI	The Bridge betweenRequirements and Implementation	Covered	
47	17/07/21	SAT	Question papers solvation	Covered	

SUMMARY

PLANNED DATE	FROM: 25.06.2021	TO: 17.07.2021	
ACTUAL CLASSES TAKEN	FROM: 02.7.2021	TO: 25.7.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: (5/7) ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE
COMPUTER SCIENCE & ENGG.
SIT, TUMAKURU-06

PRINCIPAL
Dr. Narendra Viswanath
Principal

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	19/07/21	MON	Module – 5: Design Patterns:	Covered	
49	20/07/21	TUE	Introduction; what is a design pattern?	Covered	
50	23/07/21	FRI	Describing design patterns,	Covered	
51	24/07/21	SAT	the catalogue of design patterns.	Covered	
52	28/07/21	FRI	Organizing the catalogue.	Covered	Extra
53	31/07/21	SAT	How design patterns solve design problems.	Covered	
54	26/07/21	MON	how to select a design patterns.	Covered	Extra
55	27/07/21	TUE	how to use a design pattern.	Covered	
56	02/08/21	MON	Creational patterns: prototype and singleton (only);	Covered	
57	03/08/21	TUE	Creational patterns: prototype and singleton (only);cont...	Covered	
58	06/08/21	FRI	Structural patterns adaptor and proxy (only)	Covered	
59	07/08/21	SAT	Question papers solvation	Covered	
60	07/07/21	SAT	Question papers solvation	Covered	

SUMMARY

PLANNED DATE	FROM: 19.07.2021	TO: 07.08.2021	
ACTUAL CLASSES TAKEN	FROM: 19.07.21	TO: 07.08.21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

20-21 (EVEN)

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SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2021) MACROSCHEDULE

SUBJECT	**OBJECT-ORIENTED MODELING AND DESIGN**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS642**	**SEM/SEC**	**VI**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

CO1: Describe the concepts of object-oriented and basic class modelling.
CO2: Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.
CO3: Choose and apply a befitting design pattern for the given problem.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	19.04.2021 to 10.05.2021	[redacted] **Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development. OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. Class Modelling: Object and Class Concept; Link and associations concepts; Generalization and Inheritance; A sample class model; Navigation of class models; Advanced Class Modelling, Advanced object and class concepts; Association ends; N-ary associations; Aggregation; Abstract classes; Multiple inheritance; Metadata; Reification; Constraints; Derived Data; Packages. Question papers solvation	https://www.youtube.com/watch?v=9IAPZeGSbME&list=PLDN4rrl48XKpZkf03iYFl-O29szjTrs_O https://www.youtube.com/watch?v=GQNTBv5sKbE&list=PLrjkJTal2Ignn8wGQvNhpdnm2gkos8CXCmi https://www.youtube.com/watch?v=swE1siO7gEE&list=PLr-JvKqQuZAtf--1GsJWB8amWDWRhEM7WW

2.	11.05.2021 to 05.06.2021	**Module -2:UseCaseModelling and Detailed Requirements** Overview; Detailed objectoriented Requirements definitions System Processes-A use case/Scenario view Identifying Input and outputs-The System sequence diagram Identifying Input and outputs-The System sequence diagram cont… Identifying Object Behaviour- Identifying Object Behaviourcont… The state chart Diagram Integrated Object-oriented Models. Question papers solvation	https://www.youtube.com/watch?v=2Rr2tW9zvRg https://www.youtube.com/watch?v=YAE1FsYGotA https://www.youtube.com/watch?v=PfEmF07S4hw
3.	07.06.2021 to 22.06.2021	**Module -3:Process Overview** System Conception and Domain Analysis Process Overview: Development stages; Development life Cycle System Conception: Devising a system concept; Elaborating a concept; preparing a problem statement Domain Analysis: Overview of analysis Domain Class model: Domain state model Domain interaction model Iterating the analysis Question papers solvation	https://www.youtube.com/watch?v=ARvQcqJ_-NY https://www.youtube.com/watch?v=IMOpX3g8NJI https://www.youtube.com/watch?v=OONTOv5zKhE&list=PLrjkTql3jnm8wGQvNhgsImm2gkoa8CXCml

4.	25.06.2021 to 17.07.2021	**Module -4: Use case Realization :The Design Discipline within up iterations:** Object Oriented Design-The Bridge between Requirements and Implementation Object Oriented Design-The Bridge between Requirements and Implementation cont..... Design Classes and Design within Class Diagrams; Interaction Diagrams-Realizing Use Case and defining methods; Designing with Communication Diagrams Updating the Design Class Diagram; Package Diagrams-Structuring the Major Components; Implementation Issues for Three-Layer Design. Question papers solvation	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLJLIlyhs0rEK3NKhnq7acXYIcA0o1dXb https://www.youtube.com/watch?v=IVR2u9lxsI8&list=PLdo5W4Nhv31aBrJE13WS4MR9LRfbmZrAQs https://www.youtube.com/watch?v=oN30rf2P9gE https://www.youtube.com/watch?v=Ge4mWmJBxw
5.	19.07.2021 to 07.08.2021	**Module -5: Design Patterns** Introduction; what is a design pattern? Describing design patterns, the catalogue of design patterns. Organizing the catalogue. How design patterns solve design problems. how to select a design patterns. how to use a design pattern. Creational patterns: prototype and singleton (only); Creational patterns: prototype and singleton (only);cont.... Structural patterns adaptor and proxy (only) Question papers solvation Question papers solvation	https://www.youtube.com/watch?v=DKCbsIDBN6c https://www.youtube.com/watch?v=xFv_Hl4B83A https://www.youtube.com/watch?v=Lm378j0CaYM&list=PL8xmnXm7pVtweQRrWxbyGA7OfmCicNBsby https://www.youtube.com/watch?v=3RfiNPc0_Q6g https://www.youtube.com/watch?v=1EEP_sNb62k https://www.youtube.com/watch?v=PfkB59qIMRE https://www.youtube.com/watch?v=nLmhmB6NzcM

Suthan R
Staff Incharge

Prof. G.V Shanmukaswamy
HOD, CSE

Dr. Nagendra Vishwanath
Principal

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT -FEB 2022) MICROSCHEDULE

SUBJECT	ATC	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS54	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	**Why study the Theory of Computation, Languages and Strings**: Strings, Languages.	Covered	
2	01/10/21	WED	A Language Hierarchy, Computation,	Covered	
3	08/10/21	THU	**Finite State Machines (FSM)**: Deterministic FSM,	Covered	
4	09/10/21	FRI	Regular languages,	covered	
5	12/10/21	SAT	Designing FSM, Nondeterministic FSMs,	Covered	
6	13/10/21	TUE	From FSMs to Operational Systems, Simulators forFSMs,	Covered	
7	16/10/21	THU	Minimizing FSMs,	Covered	
8	19/10/21	FRI	Canonical form of Regular languages,	Covered	
9	21/10/21	MON	Canonical form of Regular languages,	Covered	
10	23/10/21	TUE	Bidirectional Transducers.	Covered	

SUMMARY

PLANNED DATE	FROM: 5.10.2021	TO: 23.10.2021	
ACTUAL CLASSES TAKEN	FROM: 5.10.2021	TO: 23.10.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff In-charge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra V G
Principal

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	26/10/21	FRI	what is a RE?	Covered	
12	27/10/21	THU	Kleene"s theorem	Covered	
13	28/10/21	MON	Applications of REs	Covered	
14	29/10/21	TUE	Manipulating and Simplifying REs	Covered	
15	02/11/21	THU	Regular Grammars: Definition, Regular Grammars and Regular languages.	Covered	
16	04/11/21	FRI	Regular Languages (RL) and Non-regular Languages:	Covered	
17	06/11/21	MON	How many RLs	Covered	
18	09/11/21	TUE	To show that a language is regular	Covered	
19	10/11/21	THU	Closure properties of RLs	Covered	
20	11/11/21	FRI	to show some languages are not RLs.	Covered	

SUMMARY

PLANNED DATE	FROM: 26.10.2021	TO: 11.11.2021	
ACTUAL CLASSES TAKEN	FROM: 26.10.2021	TO: 11.11.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	12/11/21	MON	Introduction to Rewrite Systems and Grammars	Covered	
22	13/11/21	TUE	CFGs and languages	Covered	
23	16/11/21	THU	designing CFGs	Covered	
24	17/11/21	TUE	simplifying CFGs	Covered	
25	24/11/21	THU	proving that a Grammar is correct	Covered	
26	25/11/21	FRI	Derivation and Parse trees	Covered	
27	27/11/21	MON	Ambiguity, Normal Forms	Covered	
28	30/11/21	TUE	Pushdown Automata (PDA): Definition of non-deterministic PDA, Deterministic and Non-deterministic PDAs	Covered	
29	01/12/21	THU	Nondeterminism and Halting	Covered	
30	02/12/21	FRI	alternative equivalent definitions of a PDA, alternatives that are not equivalent to PDA	Covered	

SUMMARY

PLANNED DATE	FROM: 12.11.2021	TO: 02.12.2021	
ACTUAL CLASSES TAKEN	FROM: 12.11.2021	TO: 02.12.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: ✓	SEMINARS:	ANY OTHER: ✓

Kiran G M
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	04/12/21	MON	**Algorithms and Decision Procedures for CFLs**:	Covered	
32	07/12/21	TUE	Decidable questions	Covered	
33	08/12/21	THU	Un-decidable questions	Covered	
34	09/12/21	THU	**Turing Machine**: Turing machine model,	Covered	
35	10/12/21	THU	Representation	Covered	
36	11/12/21	FRI	Language acceptability by TM	Covered	
37	16/12/21	MON	design of TM	Covered	
38	17/12/21	TUE	Techniques for TM construction	Covered	
39	18/12/21	THU	Variants of Turing Machines (TM)	Covered	
40	21/12/21	TUE	The model of Linear Bounded automata.	Covered	

SUMMARY

PLANNED DATE	**FROM: 04.12.2021**	**TO: 21.12.2021**	
ACTUAL CLASSES TAKEN	**FROM: 04.12.2021**	**TO: 21.12.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Prof. C V Shivakumaraswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
BHOOMI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
41	01/01/22	THU	Definition of an algorithm.	Covered	
42	04/01/22	MON	decidability	Covered	
43	05/01/22	TUE	decidable languages	Covered	
44	07/01/22	THU	Undecidable languages	Covered	
45	08/01/22	FRI	Halting problem of TM	Covered	
46	11/01/22	MON	Post correspondence problem	Covered	
47	12/01/22	TUE	Complexity: Growth rate Oof functions	Covered	
48	13/01/22	THU	the classes of P and NP	Covered	
49	15/01/22	FRI	Quantum Computation: quantum computers	Covered	
50	18/01/22	MON	ChurchTuring thesis	Covered	
51	19/01/22	TUE	**Applications:** G.1 Defining syntax of programming language.	Covered	
52	25/01/22	WED	Appendix J: Security	Covered	

SUMMARY

PLANNED DATE	**FROM: 01.01.2022**	**TO: 25.01.2022**	
ACTUAL CLASSES TAKEN	**FROM: 01.01.2022**	**TO: 25.01.2022**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran GM
Staff Incharge

Prof. C A Shivakaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 - JAN 2022)

MACROSCHEDULE

SUBJECT	**APPLICATION DEVELOPMENT USING PYTHON**	**STAFF NAME**	**PROF. SHANMUKASWAMY CV**
SUBJECT CODE	**18CS55**	**SEM/SEC**	**5th / 'A'**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

- **CO1**: Demonstrate proficiency in handling of loops and creation of functions.
- **CO2**: Identify the methods to create and manipulate lists, tuples and dictionaries.
- **CO3**: Discover the commonly used operations involving regular expressions and file system.
- **CO4**: Interpret the concepts of Object-Oriented Programming as used in Python.
- **CO5**:Determine the need for scraping websites and working with CSV, JSON and other file formats.

Sl. No	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	05.10.2021 to 28.10.2021	**Module – 1:** **Python Basics**, Entering Expressions into the Interactive Shell, The Integer, Floating-Point, and String Data Types, String Concatenation and Replication, Storing Values in Variables, Your First Program, Dissecting Your Program,**Flow control,** Boolean Values, Comparison Operators, Boolean Operators,Mixing Boolean and Comparison Operators, Elements of Flow Control, Program Execution, Flow Control Statements, Importing Modules,Ending a Program Early with sys.exit(), **Functions,** def Statements with Parameters, Return Values and return Statements,The None Value, Keyword Arguments and print(), Local and Global Scope, The global Statement, Exception Handling, A Short Program: Guess the Number	https://www.youtube.com/watch?v=08APZzGSbME&list=PLD94fr34BXBqZ4r03iYCh-02PoiTrx_O https://www.youtube.com/watch?v=GQNT0v5zk3I&list=PLrjkTgDjunBwG4jvNbpJoun2gkoa9CXCm https://www.youtube.com/watch?v=swE1s0QTgEE&list=PL-JvKuQn2AtI-1Ga3WB8omWQWRhEMZWW
2.	30.10.2021 to 24.11.2021	**Module – 2:** **Lists,** The List Data Type, Working with Lists, Augmented Assignment Operators, Methods, Example Program: Magic 8 Ball with a List, List-like Types: Strings and Tuples, References, **Dictionaries and Structuring Data,** The Dictionary Data Type, Pretty Printing, Using Data Structures to Model Real-World Things, **Manipulating Strings,** Working with Strings, Useful String Methods, Project: Password Locker, Project: Adding Bullets to Wiki Markup	https://www.youtube.com/watch?v=2Rr2tW9zvRg https://www.youtube.com/watch?v=YAE1IsYGoiA https://www.youtube.com/watch?v=PfTmf07S4hw

3.	25.11.2021 to 16.12.2021	**Module – 3 :** **Pattern Matching with Regular Expressions,** Finding Patterns of Text Without Regular Expressions, Finding Patterns of Text with Regular Expressions,More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching, The findall() Method, Character Classes, Making Your Own Character Classes, The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching, Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re .IGNORECASE, re .DOTALL, and re .VERBOSE, Project: Phone Number and Email Address Extractor, **Reading and Writing Files,** Files and File Paths, The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function, Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files,** The shutil Module, Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging,** Raising Exceptions, Getting the Traceback as a String, Assertions, Logging, IDLE's Debugger.	https://www.youtube.com/watch?v=ARvQcqJ_-NY https://www.youtube.com/watch?v=IMOpX3g8SJI https://www.youtube.com/watch?v=GQNT0v5zKhE&list=PLrjkTqI3jnm8wGQvNbgdnnn2gkoo8CXCm1
4.	18.12.2021 to 08.01.2022	**Module 4:Classes and objects,** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying, **Classes and functions,** Time, Pure functions, Modifiers, Prototyping versus planning, **Classes and methods,** Object-oriented features, Printing objects, Another example, A more complicated example,Theinit method, The __str__ method, Operator overloading, Type-based dispatch, Polymorphism, Interface and implementation,**Inheritance,** Card objects, Class attributes, Comparing cards, Decks, Printing the deck, Add, remove, shuffle and sort, Inheritance, Class diagrams, Data encapsulation.	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLJUJLflvhz0rF83NKbnq7ucXYIcA0v1dXb https://www.youtube.com/watch?v=IVR2u9lrxI8&list=PL4o5W4Nhv31a8krJE1W54MR9LRfbmZrAQu
5.	11.01.2022 to 29.01.2022	**MODULE-5:** **Web Scraping,** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module, Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module, Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics, Controlling the Browser with the selenium Module, **Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module, Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents, Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns, Charts, **Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs, Word Documents, **Working with CSV files and JSON data,** The csv Module, Project: Removing the Header from CSV Files, JSON and APIs, The json Module, Project: Fetching Current Weather Data	https://www.youtube.com/watch?v=D8Chvi1BBNc https://www.youtube.com/watch?v=xFv_HH4B83A https://www.youtube.com/watch?v=Lm378j0CuYM&list=PL8xmnXn7pYtwsQRrWxhvGA7OfmGeNBshv https://www.youtube.com/watch?v=3RBNPvl_Q6g https://www.youtube.com/watch?v=1FEP_sNb62k https://www.youtube.com/watch?v=PkH89qlMREo

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Narendra Viswanath
Principal
Principal
SHRIDEVI INSTITUTE OF ENGG & TECHNOLOGY
TUMAKURU - 572 106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-FEB 2022) MICROSCHEDULE

SUBJECT	APPLICATION DEVELOPMENT USING PYTHON	STAFF NAME	PROF. SHANMUKASWAMY CV
SUBJECT CODE	18CS55	SEM/SEC	5th / 'A'
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	**Module – 1 :Python Basics,** Entering Expressions into the Interactive Shell	Yes	
2	07/10/21	THUR	The Integer, Floating-Point, and String Data Types,	Yes	
3	09/10/21	SAT	String Concatenation and Replication, Storing Values in Variables	Yes	
4	12/10/21	TUE	**Flow control,** Boolean Values, Comparison Operators, Boolean Operators	Yes	
5	13/10/21	WED	Mixing Boolean and Comparison Operators, Elements of Flow Control,	Yes	
6	16/10/21	SAT	Program Execution, Flow Control Statements	Yes	
7	19/10/21	TUE	Importing Modules,Ending a Program Early with sys.exit().	Yes	
8	21/10/21	THUR	**Functions,** def Statements with Parameters, Return Values and return Statements,The None Value	Yes	
9	23/10/21	SAT	Keyword Arguments and print().	Yes	
10	26/10/21	TUE	Local and Global Scope,	Yes	
11	27/10/21	WED	The global Statement, Exception Handling	Yes	
12	28/10/21	THUR	A Short Program: Guess the Number	Yes	

SUMMARY

PLANNED DATE	05/10/21	TO: 28/10/21	
ACTUAL CLASSES TAKEN	FROM: 5/10/21	TO: 28/10/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Naresh
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	30/10/21	SAT	**Lists,** The List Data Type, Working with Lists	Y	
14	2/11/21	TUE	Augmented Assignment Operators, Methods	Y	
15	4/11/21	THUR	Example Program: Magic 8 Ball with a List	Y	
16	6/11/21	SAT	List-like Types: Strings and Tuples,References	Y	
17	9/11/21	TUE	**Dictionaries and Structuring Data,** The Dictionary Data Type,	Y	
18	10/11/21	WED	Pretty Printing	Y	
19	11/11/21	THUR	Using Data Structures to Model Real-World Things,	Y	
20	13/11/21	SAT	**Manipulating Strings,** Working with Strings	Y	
21	16/11/21	TUE	Useful String Methods,	Y	
22	17/11/21	WED	Project: Password Locker	Y	
23	23/11/21	TUE	Project: Adding Bullets to Wiki Markup	Y	
24	24/11/21	WED	Adding Bullets to Wiki Markup Contd.....	Y	

SUMMARY

PLANNED DATE	FROM: 30/10/21	TO: 24/11/21	
ACTUAL CLASSES TAKEN	FROM: 30/10/21	TO: 24/11/21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: Y
	QUIZ:	SEMINARS:	ANY OTHER:

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	25/11/21	THUR	**Pattern Matching with Regular Expressions,** Finding Patterns of Text Without Regular Expressions,	Y&M	
26	27/11/21	SAT	Finding Patterns of Text with Regular Expressions	Y&M	
27	30/11/21	TUE	More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching,	Y&M	
28	1/12/21	WED	The findall() Method, Character Classes, Making Your Own Character Classes	Y&M	
29	2/12/21	THUR	The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching	Y&M	
30	4/12/21	SAT	Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re .IGNORECASE, re .DOTALL, and re .VERBOSE	Y&M	
31	7/12/21	TUE	Project: Phone Number and Email Address Extractor, **Reading and Writing Files,** Files and File Paths	Y&M	
32	8/12/21	WED	The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function	Y&M	
33	9/12/21	THUR	Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files,** The shutil Module	Y&M	
34	14/12/21	TUE	Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style	Y&M	
35	15/12/21	WED	Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging,** Raising Exceptions	Y&M	
36	16/12/21	THUR	Getting the Traceback as a String, Assertions, Logging, IDLE"s Debugger,	Y&M	

SUMMARY

PLANNED DATE	**FROM:** 25/11/21	**TO:** 16/12/21	
ACTUAL CLASSES TAKEN	**FROM:** 25/11/21	**TO:** 1	
NUMBER OF CLASSES	**ALLOCATED:** 12	**TAKEN:** 9	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 01	**TUTORIALS:** —	**QP DISCUSSION:** Y&M
	QUIZ:	**SEMINARS:** 1	**ANY OTHER:**

Prof. Shanmukaswamy CV
Staff Incharge

Prof. Shanmukaswamy CV
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	18/12/21	SAT	**Classes and objects,** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying	Covered	
38	21/12/21	TUE	**Classes and functions,** Time, Pure functions, Modifiers, Prototyping versus planning,	Covered	
39	22/12/21	WED	**Classes and methods,** Object-oriented features, Printing objects, Another example,	Covered	
40	23/12/21	THUR	A more complicated example, The init method, The __str__ method, Operator overloading,	Covered	
41	30/12/21	THUR	Type-based dispatch, Polymorphism, Interface and implementation	Covered	
42	01/01/22	SAT	**Inheritance,** Card objects, Class attributes	Covered	
43	04/01/22	TUE	Comparing cards, Decks,	Covered	
44	5/01/22	WED	Printing the deck, Add, remove	Covered	
45	6/01/22	THUR	shuffle and sort, Inheritance	Covered	
46	8/01/22	SAT	Class diagrams, Data encapsulation	Covered	

SUMMARY

PLANNED DATE	**FROM:** 18/12/21	**TO:** 8/01/22	
ACTUAL CLASSES TAKEN	**FROM:** 18/12/21	**TO:** 8/1/22	
NUMBER OF CLASSES	**ALLOCATED:** 10	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Prof. Shanmukhaswamy CV
Staff Incharge

Prof. Shanmukhaswamy CV
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
47	11/01/22	TUE	**Web Scraping,** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module	Covered	
48	12/01/22	WED	Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module	Covered	
49	13/01/22	THUR	Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics	Covered	
50	15/01/22	SAT	Controlling the Browser with the selenium Module	Covered	
51	18/01/22	TUE	**Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module,	Covered	
52	19/01/22	WED	Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents	Covered	
53	25/01/22	TUE	Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns	Covered	
54	26/01/22	WED	**Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs	Covered	
55	27/01/22	THUR	Word Documents, **Working with CSV files and JSON data,**	Covered	
56	29/01/22	SAT	The csv Module, Project: Removing the Header from CSV Files, JSON and APIs, The json Module, Project: Fetching Current Weather Data	Covered	

SUMMARY

PLANNED DATE	**FROM:** 11/01/22	**TO:** 29/01/22	
ACTUAL CLASSES TAKEN	**FROM:** 11/1/22	**TO:** 29/1/22	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Prof. Shanmukhaswamy CV
Staff Incharge

Prof. Shanmukhaswamy CV
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2022) MACROSCHEDULE

SUBJECT	**APPLICATION DEVELOPMENT USING PYTHON**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS55**	**SEM/SEC**	**V 'B'**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Prof. Sharmila
Engg CSE

Course Outcomes or Cos

- **CO1**: Demonstrate proficiency in handling of loops and creation of functions.
- **CO2**: Identify the methods to create and manipulate lists, tuples and dictionaries.
- **CO3**: Discover the commonly used operations involving regular expressions and file system.
- **CO4**: Interpret the concepts of Object-Oriented Programming as used in Python.
- **CO5**:Determine the need for scraping websites and working with CSV, JSON and other file formats.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	05.10.2021 to 28.10.2021	**Module – 1 :** **Python Basics,** Entering Expressions into the Interactive Shell, The Integer, Floating-Point, and String Data Types, String Concatenation and Replication, Storing Values in Variables, Your First Program, Dissecting Your Program.**Flow control,** Boolean Values, Comparison Operators, Boolean Operators,Mixing Boolean and Comparison Operators, Elements of Flow Control, Program Execution, Flow Control Statements, Importing Modules,Ending a Program Early with sys.exit(), **Functions,** def Statements with Parameters, Return Values and return Statements,The None Value, Keyword Arguments and print(), Local and Global Scope, The global Statement, Exception Handling, A Short Program: Guess the Number	https://www.youtube.com/watch?v=01APZzGSbME&list=PLDN4rrl48XKpZkf03iYFl-O29szjTrs_O https://www.youtube.com/watch?v=GQNTfh5sKbE&list=PLzjkTnQly_nnfwGQxNhqdsmq3gkso8CXC&ut https://www.youtube.com/watch?v=swE1eiQ7qFE&list=PL-JvKsQ2n2Aq8-1Gs2WBbmsWOWB6ENf2W9
2.	29.10.2021 to 25.11.2021	**Module – 2:** **Lists,** The List Data Type, Working with Lists, Augmented Assignment Operators, Methods, Example Program: Magic 8 Ball with a List, List-like Types: Strings and Tuples,References, **Dictionaries and Structuring Data,** The Dictionary Data Type, Pretty Printing, Using Data Structures to Model Real-World Things, **Manipulating Strings,** Working with Strings, Useful String Methods, Project: Password Locker, Project: Adding Bullets to Wiki Markup	https://www.youtube.com/watch?v=28r2tW9rvRg https://www.youtube.com/watch?v=YAE1FsYGuuA https://www.youtube.com/watch?v=PfEmU7Sz4hss

3.	26.11.2021 to 16.12.2021	**Module – 3 :** **Pattern Matching with Regular Expressions.** Finding Patterns of Text Without Regular Expressions, Finding Patterns of Text with Regular Expressions,More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching, The findall() Method, Character Classes, Making Your Own Character Classes, The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching, Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re.IGNORECASE, re.DOTALL, and re.VERBOSE, Project: Phone Number and Email Address Extractor, **Reading and Writing Files,** Files and File Paths, The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function, Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files,** The shutil Module, Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging,** Raising Exceptions, Getting the Traceback as a String, Assertions, Logging, IDLE's Debugger.	https://www.youtube.com/watch?v=A8vQsuJ_-NY https://www.youtube.com/watch?v=1M0pN3q99NI https://www.youtube.com/watch?v=GQNT0v5zKhE&list=PLrjkTuJ1nm8wGQyNbgdmm2gkua8CXCmJ
4.	17.12.2021 to 04.01.2022	**Module 4:** **Classes and objects,** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying, **Classes and functions,** Time, Pure functions, Modifiers, Prototyping versus planning, **Classes and methods,** Object-oriented features, Printing objects, Another example, A more complicated example,The init method, The __str__ method, Operator overloading, Type-based dispatch, Polymorphism, Interface and implementation,**Inheritance,** Card objects, Class attributes, Comparing cards, Decks, Printing the deck, Add, remove, shuffle and sort, Inheritance, Class diagrams, Data encapsulation.	https://www.youtube.com/watch?v=5d8GiRueKU3M https://www.youtube.com/watch?v=5d8GiRueKU3M&list=PLfUL1lvhz0rE83NKbnq7acXYJeA0o1dXb https://www.youtube.com/watch?v=fV82u9hxf8&list=PLdo5W4Nhv31aBrJE1WS4MR9LRfbmZrAQu https://www.youtube.com/watch?v=uNI0rf2P9gE https://www.youtube.com/watch?v=Ge4mWvmJI8w

5.	16.01.2022 to 29.01.2022	**MODULE-5:** **Web Scraping,** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module, Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module, Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics, Controlling the Browser with the selenium Module, **Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module, Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents, Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns, Charts, **Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs, Word Documents, **Working with CSV files and JSON data,** The csv Module, Project: Removing the Header from CSV Files, JSON and APIs, The json Module, Project: Fetching Current Weather Data	https://www.youtube.com/watch?v=DKChsDBNfsc https://www.youtube.com/watch?v=sEv_H04883A https://www.youtube.com/watch?v=LmE7fj0CaYM&list=PL8amnXn7pVtwtQ8tWshyGA7OfinGcNHnbs https://www.youtube.com/watch?v=3RBNPc0_Q6g https://www.youtube.com/watch?v=1FEP_sNb62k https://www.youtube.com/watch?v=PfkBS9qlM8E https://www.youtube.com/watch?v=nLmhmB6NzcM

Suthan R
Staff Incharge

Prof. C.V Sharmakaswathi
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-FEB 2022) MICROSCHEDULE

SUBJECT	APPLICATION DEVELOPMENT USING PYTHON	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS55	SEM/SEC	V 'B'
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	**Module – 1 :Python Basics**, Entering Expressions into the Interactive Shell	Covered	
2	07/10/21	THU	The Integer, Floating-Point, and String Data Types.	Covered	
3	08/10/21	FRI	String Concatenation and Replication, Storing Values in Variables	Covered	
4	09/10/21	SAT	**Flow control,** Boolean Values, Comparison Operators, Boolean Operators	Covered	
5	12/10/21	TUE	Mixing Boolean and Comparison Operators, Elements of Flow Control,	Covered	
6	16/10/21	SAT	Program Execution, Flow Control Statements	Covered	
7	19/10/21	TUE	Importing Modules,Ending a Program Early with sys.exit(),	Covered	
8	21/10/21	THU	**Functions,** def Statements with Parameters, Return Values and return Statements,The None Value	Covered	
9	22/10/21	FRI	Keyword Arguments and print(),	Covered	
10	23/10/21	SAT	Local and Global Scope,	Covered	
11	26/10/21	TUE	The global Statement, Exception Handling	Covered	
12	28/10/21	THU	A Short Program: Guess the Number	Covered	

SUMMARY

PLANNED DATE	05.10.2021	TO: 28.10.2021	
ACTUAL CLASSES TAKEN	FROM: 5/10/2021	TO: 28/10/2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C. Nanjundaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	29/10/21	FRI	**Lists.** The List Data Type. Working with Lists	Covered	
14	30/10/21	SAT	Augmented Assignment Operators, Methods	Covered	
15	2/11/21	TUE	Example Program: Magic 8 Ball with a List	Covered	
16	4/11/21	THU	List-like Types: Strings and Tuples,References	Covered	
17	6/11/21	SAT	**Dictionaries and Structuring Data.** The Dictionary Data Type,	Covered	
18	9/11/21	TUE	Pretty Printing	Covered	
19	11/11/21	THU	Using Data Structures to Model Real-World Things.	Covered	
20	12/11/21	FRI	**Manipulating Strings.** Working with Strings	Covered	
21	13/11/21	SAT	Useful String Methods,	Covered	
22	16/11/21	TUE	Project: Password Locker	Covered	
23	23/11/21	TUE	Project: Adding Bullets to Wiki Markup	Covered	
24	25/11/21	THU	Adding Bullets to Wiki Markup Cont.....	Covered	

SUMMARY

PLANNED DATE	FROM: 29.10.2021	TO: 25.11.2021	
ACTUAL CLASSES TAKEN	FROM: 29.10.2021	TO: 25.11.2021	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suhas R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	26/11/21	FRI	**Pattern Matching with Regular Expressions,** Finding Patterns of Text Without Regular Expressions,	Covered	
26	27/11/21	SAT	Finding Patterns of Text with Regular Expressions	Covered	
27	30/11/21	TUE	More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching,	Covered	
28	02/12/21	THU	The findall() Method, Character Classes, Making Your Own Character Classes	Covered	
29	03/12/21	FRI	The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching	Covered	
30	04/12/21	SAT	Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re.IGNORECASE, re .DOTALL, and re .VERBOSE	Covered	
31	07/12/21	TUE	Project: Phone Number and Email Address Extractor, **Reading and Writing Files,** Files and File Paths	Covered	
32	09/12/21	THU	The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function	Covered	
33	10/12/21	FRI	Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files,** The shutil Module	Covered	
34	11/12/21	SAT	Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style	Covered	
35	14/12/21	TUE	Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging,** Raising Exceptions	Covered	
36	16/12/21	THU	Getting the Traceback as a String, Assertions, Logging, IDLE"s Debugger.	Covered	

SUMMARY

PLANNED DATE	FROM: 26.11.21	TO:16.12.21	
ACTUAL CLASSES TAKEN	FROM: 26.11.21	TO: 16.12.21	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Sudhan R
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	17/12/21	FRI	**Classes and objects,** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying	covered	
38	18/12/21	SAT	**Classes and functions,** Time, Pure functions, Modifiers, Prototyping versus planning	Covered	
39	21/12/21	TUE	**Classes and methods,** Object-oriented features, Printing objects, Another example,	Covered	
40	23/12/21	THU	A more complicated example,The init method, The __str__ method, Operator overloading,	Covered	
41	24/12/21	FRI	Type-based dispatch, Polymorphism, Interface and implementation	Covered	
42	25/12/21	SAT	**Inheritance,** Card objects, Class attributes	Covered	
43	30/12/21	THU	Comparing cards, Decks,	Covered	
44	31/12/21	FRI	Printing the deck, Add, remove	Covered	
45	01/01/22	SAT	shuffle and sort, Inheritance	Covered	
46	04/01/22	TUE	Class diagrams, Data encapsulation	Covered	

SUMMARY

PLANNED DATE	FROM: 17.12.21	TO: 04.01.22	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C.Y Shivakarswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
47	06/01/22	THU	**Web Scraping,** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module	Covered	
48	07/01/22	FRI	Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module	Covered	
49	08/01/22	SAT	Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics	Covered	
50	11/01/22	TUE	Controlling the Browser with the selenium Module	Covered	
51	13/01/22	THU	**Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module,	Covered	
52	15/01/22	SAT	Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents	Covered	
53	18/01/22	TUE	Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns	Covered	
54	25/01/22	TUE	**Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs	Covered	
55	27/01/22	THU	Word Documents, **Working with CSV files and JSON data,**	Covered	
56	28/01/22	FRI	The csv Module, Project: Removing the Header from CSV Files, JSON and APIs,	Covered	
57	29/01/22	SAT	The json Module, Project: Fetching Current Weather Data	Covered	

SUMMARY

PLANNED DATE	FRONE: 16.01.22	TO: 29.1.22	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Prof. C.V. [illegible]swamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -FEB 2022) MACRO SCHEDULE

SUBJECT	UNIX PROGRAMMING	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS56	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Explain Unix Architecture, File system and use of Basic Commands
- Illustrate Shell Programming and to write Shell Scripts
- Categorize, compare and make use of Unix System Calls
- Build an application/service over a Unix system.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.04.2021 to 04.05.2021	**Module –1** **Introduction:** Unix Components/Architecture. Features of Unix. The UNIX Environment and UNIX Structure. Posix and Single Unix specification. General features of Unix commands/ command structure. Command arguments and options. Basic Unix commands such as echo, printf, ls, who, date,passwd, cal. Combining commands. Meaning of Internal and external commands. The type command: knowing the type of a command and locating it. The root login. Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files. Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable. Reaching required files- the PATH variable, manipulating the PATH. Relative and absolute pathnames. Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names. File related commands – cat, mv, rm, cp, wc and od commands **No. of Contact Sessions: 10**	http://www.cs.mtech.ac.nz/Teaching/Unix/overview.html https://www.geeksforgeeks.org/introduction-to-unix-system/ https://www.youtube.com/watch?v=LE0hcbvS5I

2	05.05.2021 To 19.05.2021	**Module –2** **File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods. Recursively changing file permissions. Directory permissions. The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards. Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions. The grep, egrep. Typical examples involving different regular expressions. **Shell programming:** Ordinary and environment variables. The. Profile. Read and readonly commands. Command line arguments. Exit and exit status of a command. Logical operators for conditional execution. The test command and its shortcut. The if, while, for and case control statements. The set and shift commands and handling positional parameters. The here (<<) document and trap command. Simple shell program examples **No. of Contact Sessions: 10**	https://www.tutorialspoint.com/unix/unix-file-permission.htm https://wiki.archlinux.org/title/File_permissions_and_attributes https://www.youtube.com/watch?v=XPBSBSfaAbA
3	20.05.2021 to 02.06.2021	**Module –3** **UNIX File APIs:** General File APIs, File and Record Locking, Directory File APIs, Device File APIs, FIFO File APIs, Symbolic Link File APIs, UNIX Processes and Process Control **The Environment of a UNIX Process:** Introduction, main function, Process Termination, Command-Line Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork, exit, wait, waitpid, wait3, wait4 Functions, Race Conditions, exec Functions. **No. of Contact Sessions: 10**	https://www.slideshare.net/ssuser6e6c7f/unix-file-apis-in-371569 https://www.ksigetha.org/wp-content/uploads/2020/07/file_system_M3.pdf https://www.youtube.com/watch?v=NkNi5ZUBwQ
4	03.06.2021 To 16.06.2021	**Module–4** Changing User IDs and Group IDs, Interpreter Files, system Function, Process Accounting, User Identification, Process Times, I/O Redirection. **Overview of IPC Methods**, Pipes, popen, pclose Functions, Coprocesses, FIFOs, System V IPC, Message Queues, Semaphores. **Shared Memory**, Client-Server Properties, Stream Pipes, Passing File Descriptors, An Open Server-Version 1, Client-Server Connection Functions. **No. of Contact Sessions: 10**	https://www.geeksforgeeks.org/methods-to-implement-communication/ https://www.geeff.com/interprocess-communication-in.html https://www.youtube.com/watch?v=4bjA3HBvxc

5	17.06.2021 to 30.06.2021	**Module–5** **Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals, signal, Signal Mask, sigaction, The SIGCHLD Signal and the waitpid Function, The sigsetjmp and siglongjmp Functions, Kill, Alarm, Interval Timers, POSIX.1b Timers. Daemon Processes: Introduction, Daemon Characteristics, Coding Rules, Error Logging, Client-Server Model. **No. of Contact Sessions: 10**	http://www.mathcs.emory.edu/~cheung/Courses/255/Syllabus/1-Intro/UNIX-intro.html https://www.scribd.com/document/58240374/Signals-and-Daemon-Processes-ppts https://www.youtube.com/watch?v=2gUQdHbm9Ys

Textbooks:

1. Sumitabha Das., Unix Concepts and Applications., 4thEdition., Tata McGraw Hill
   (Chapter 1,2 ,3,4,5,6,8,13,14)
2. W. Richard Stevens: Advanced Programming in the UNIX Environment, 2nd Edition, Pearson Education, 2005
   (Chapter 3,7,8,10,13,15)
3. Unix System Programming Using C++ - Terrence Chan, PHI, 1999.
   (Chapter 7,8,9,10).

Reference Books:

1. M.G. Venkatesh Murthy: UNIX & Shell Programming, Pearson Education.
2. Richard Blum , Christine Bresnahan : Linux Command Line and Shell Scripting Bible, 2nd Edition, Wiley,2014.

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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -JAN 2022) MACROSCHEDULE

SUBJECT	UNIX PROGRAMMING	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS56	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	04/10/21	MON	**Introduction:** Unix Components/Architecture. Features of UnixThe root login	Covered	
2	05/10/21	TUE	The UNIX Environment and UNIX Structure Posix and Single Unix specification	Covered	
3	08/10/21	FRI	General features of Unix commands/ command structure. Command arguments and options	Covered	
4	09/10/21	SAT	Basic Unix commands such as echo, printf, ls, who, date,passwd, cal. Combining commands	Covered	
5	11/10/21	MON	. Meaning of Internal and external commands. The type command: knowing the type of a command and locating it	Covered	
6	12/10/21	TUE	Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files.	Covered	
7	16/10/21	SAT	Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable.	Covered	
8	18/10/21	MON	Reaching required files- the PATH variable, manipulating the PATH. Relative and absolute pathnames.	Covered	
9	19/10/21	TUE	Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names.	Covered	
10	22/10/21	FRI	File related commands – cat, mv, rm, cp, wc and od commands	Covered	

SUMMARY

PLANNED DATE	FROM: 04/10/21	TO: 22/10/21	
ACTUAL CLASSES TAKEN	FROM:04/10/21	TO:22/10/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	23/10/21	SAT	**File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods.	Covered	
12	25/10/21	MON	Recursively changing file permissions. Directory permissions.	Covered	
13	26/10/21	TUE	The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards.	Covered	
14	29/10/21	FRI	Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions.	Covered	
15	30/10/21	SAT	The grep, egrep. Typical examples involving different regular expressions	Covered	
16	02/11/21	TUE	**Shell programming:** Ordinary and environment variables. The .Profile. Read and readonly commands.	Covered	
17	06/11/21	SAT	Command line arguments. Exit and exit status of a command.	Covered	
18	08/11/21	MON	Logical operators for conditional execution. The test command and its shortcut	Covered	
19	09/11/21	TUE	The if, while, for and case control statements. The set and shift commands and handling positional parameters.	Covered	
20	12/11/21	FRI	The here (<<) document and trap command. Simple shell program examples	Covered	

SUMMARY

PLANNED DATE	**FROM: 23/10/21**	**TO: 12/11/21**	
ACTUAL CLASSES TAKEN	**FROM:23/10/21**	**TO:12/11/21**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	13/11/21	MON	**UNIX File APIs:** General File APIs.	Covered	
22	15/11/21	TUE	File and Record Locking.	Covered	
23	16/11/21	FRI	Directory File APIs, Device File APIs.	Covered	
24	23/11/21	SAT	FIFO File APIs, Symbolic Link File APIs	Covered	
25	26/11/21	MON	UNIX Processes and Process Control	Covered	
26	27/11/21	TUE	**The Environment of a UNIX Process:** Introduction, main function, Process Termination.	Covered	
27	29/11/21	SAT	Command-Line Arguments, Environment List, Memory Layout of a C Program.	Covered	
28	30/11/21	MON	Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions.	Covered	
29	03/12/21	TUE	, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork	Covered	
30	04/12/21	FRI	exit, wait, waitpid, wait3,wait4 Functions, Race Conditions, exec Functions	Covered	

SUMMARY

PLANNED DATE	**FROM: 13/11/21**	**TO:04/12/21**	
ACTUAL CLASSES TAKEN	**FROM:13/11/21**	**TO:04/12/21**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
31	06/12/21	SAT	Changing User IDs and Group IDs. Interpreter Files	Covered	
32	07/12/21	MON	system Function, Process Accounting	Covered	
33	10/12/21	TUE	User Identification, Process Times, I/O Redirection.	Covered	
34	11/12/21	FRI	**Overview of IPC Methods**, Pipes, popen, pclose	Covered	
35	13/12/21	SAT	Functions, Coprocesses, FIFOs.	Covered	
36	14/12/21	TUE	System V IPC, Message Queues, Semaphores.	Covered	
37	17/12/21	SAT	**Shared Memory**, Client-Server Properties, Stream Pipes.	Covered	
38	18/12/21	MON	Passing File Descriptors,	Covered	
39	20/12/21	TUE	An Open Server-Version 1	Covered	
40	21/12/21	FRI	Client-Server Connection Functions.	Covered	

SUMMARY

PLANNED DATE	**FROM:06/12/21**	**TO: 21/12/21**	
ACTUAL CLASSES TAKEN	**FROM:06/12/21**	**TO:21/12/21**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	24/12/21	MON	**Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals	covered	
42	31/12/21	TUE	, signal, Signal Mask, sigaction	covered	
43	01/01/22	SAT	The SIGCHLD Signal and the waitpid Function,	covered	
44	03/01/22	MON	The sigsetjmp and siglongjmp Functions,	covered	
45	04/01/22	TUE	Kill, Alarm, Interval Timers	covered	
46	07/01/22	FRI	POSIX.lb Timers.	covered	
47	08/01/22	SAT	Daemon Processes: Introduction	covered	
48	10/01/22	MON	Daemon Characteristics.	covered	
49	11/01/22	TUE	Coding Rules, Error Logging.	covered	
50	15/01/22	SAT	Client-Server Model.	covered	
51	17/01/22 to 31/01/22		Revision	covered	

SUMMARY

PLANNED DATE	**FROM: 24/12/21**	**TO: 15/01/22**	
ACTUAL CLASSES TAKEN	**FROM:24/12/21**	**TO:15/01/22**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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EVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -FEB 2022) MACROSCHEDULE

SUBJECT	UNIX PROGRAMMING	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS56	SEM/SEC	V (C)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Explain Unix Architecture, File system and use of Basic Commands
- Illustrate Shell Programming and to write Shell Scripts
- Categorize, compare and make use of Unix System Calls
- Build an application/service over a Unix system.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	04/10/21 to 22/10/21	**Module –1** **Introduction:** Unix Components/Architecture, Features of Unix, The UNIX Environment and UNIX Structure, Posix and Single Unix specification, General features of Unix commands/ command structure. Command arguments and options. Basic Unix commands such as echo, printf, ls, who, date,passwd, cal. Combining commands. Meaning of Internal and external commands. The type command: knowing the type of a command and locating it. The root login. Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files. Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable. Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames. Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names. File related commands – cat, mv, rm, cp, wc and od commands **No. of Contact Sessions: 10**	http://www.ee.surrey.ac.uk/Teaching/Unix/unixintro.html https://www.geeksforgeeks.org/introduction-to-unix-os/ https://www.youtube.com/watch?v=kPRA0W1kECg

2	23/10/21 To 12/11/21	**Module –2** **File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods. Recursively changing file permissions. Directory permissions. The shells interpretive cycle. Wild cards. Removing the special meanings of wild cards. Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions. The grep, egrep. Typical examples involving different regular expressions. **Shell programming:** Ordinary and environment variables. The .Profile. Read and readonly commands. Command line arguments. Exit and exit status of a command. Logical operators for conditional execution. The test command and its shortcut. The if, while, for and case control statements. The set and shift commands and handling positional parameters. The here (<<) document and trap command. Simple shell program examples **No. of Contact Sessions: 10**	https://www.tutorialspoint.com/unix/unix-file-permission.htm https://wiki.archlinux.org/title/File_permissions_and_attributes https://www.youtube.com/watch?v=bPkMPWZvbkk
3	13/11/21 to 04/12/21	**Module –3** **UNIX File APIs:** General File APIs, File and Record Locking, Directory File APIs, Device File APIs, FIFO File APIs, Symbolic Link File APIs, UNIX Processes and Process Control **The Environment of a UNIX Process:** Introduction, main function, Process Termination, Command-Line Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork, exit, wait, waitpid, wait3, wait4 Functions, Race Conditions, exec Functions. **No. of Contact Sessions: 10**	https://www.slideshare.net/ssuser6e1f7d/unix-file-apis-167150 https://www.tutorialspoint.com/unix/unix-file-system.htm https://www.youtube.com/watch?v=YkAdVvBmGI
4	06/12/21 To 21/12/21	**Module–4** Changing User IDs and Group IDs. Interpreter Files. system Function. Process Accounting. User Identification. Process Times. I/O Redirection. **Overview of IPC Methods.** Pipes, popen, pclose Functions, Coprocesses, FIFOs, System V IPC, Message Queues, Semaphores. **Shared Memory.** Client-Server Properties. Stream Pipes, Passing File Descriptors, An Open Server-Version 1, Client-Server Connection Functions. **No. of Contact Sessions: 10**	https://www.geeksforgeeks.org/methods-for-interprocess-communication/ https://www.geeks3d.com/interprocess-communication-ipc.html https://www.youtube.com/watch?v=6hNkHW8Rxtk

5	24/12/21 to 15/01/22	**Module–5** **Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals, signal, Signal Mask, sigaction, The SIGCHLD Signal and the waitpid Function, The sigsetjmp and siglongjmp Functions, Kill, Alarm, Interval Timers, POSIX.lb Timers. Daemon Processes: Introduction, Daemon Characteristics, Coding Rules, Error Logging, Client-Server Model. **No. of Contact Sessions: 10**	http://www.math.uni.wroc.pl/~l.s.l/90/0809/Books/handbook/node-daemons.html https://www.scribd.com/document/361417474/Signals-and-Daemon-Processes-ppt https://www.youtube.com/watch?v=2gUOgbHmvPo

Textbooks:

1. Sumitabha Das., Unix Concepts and Applications., 4thEdition., Tata McGraw Hill (Chapter 1,2 ,3,4,5,6,8,13,14)
2. W. Richard Stevens: Advanced Programming in the UNIX Environment, 2nd Edition, Pearson Education, 2005 (Chapter 3,7,8,10,13,15)
3. Unix System Programming Using C++ - Terrence Chan, PHI, 1999. (Chapter 7,8,9,10).

Reference Books:

1. M.G. Venkatesh Murthy: UNIX & Shell Programming, Pearson Education.
2. Richard Blum , Christine Bresnahan : Linux Command Line and Shell Scripting Bible, 2nd Edition, Wiley,2014.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -JULY 2021) MICROSCHEDULE

SUBJECT	UNIX PROGRAMMING	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS56	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19/04/21	MON	**Introduction:** Unix Components/Architecture. Features of UnixThe root login	Covered	
2	20/04/21	TUE	The UNIX Environment and UNIX Structure Posix and Single Unix specification	Covered	
3	21/04/21	WED	General features of Unix commands/ command structure. Command arguments and options	Covered	
4	22/04/21	THU	Basic Unix commands such as echo, printf, ls, who, date,passwd, cal, Combining commands	Covered	
5	26/04/21	MON	Meaning of Internal and external commands. The type command; knowing the type of a command and locating it	Covered	
6	27/04/21	TUE	Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files.	Covered	
7	28/04/21	WED	Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable.	Covered	
8	29/04/21	THU	Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames.	Covered	
9	03/05/21	MON	Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names.	Covered	
10	04/05/21	TUE	File related commands – cat, mv, rm, cp, wc and od commands	Covered	

SUMMARY

PLANNED DATE	FROM: 19.04.2021	TO: 04.05.2021	
ACTUAL CLASSES TAKEN	FROM: 19.04.2021	TO: 04.05.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	05/05/21	WED	**File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods.	Covered	
12	06/05/21	THU	Recursively changing file permissions. Directory permissions.	Covered	
13	07/05/21	MON	The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards.	Covered	
14	10/05/21	TUE	Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions.	Covered	
15	11/05/21	WED	The grep, egrep. Typical examples involving different regular expressions	Covered	
16	12/05/21	THU	**Shell programming:** Ordinary and environment variables. The. Profile. Read and readonly commands.	Covered	
17	13/05/21	MON	Command line arguments. Exit and exit status of a command.	Covered	
18	17/05/21	TUE	Logical operators for conditional execution. The test command and its shortcut	Covered	
19	18/05/21	WED	The if, while, for and case control statements. The set and shift commands and handling positional parameters.	covered	
20	19/05/21	THU	The here (<<) document and trap command. Simple shell program examples	covered	

SUMMARY

PLANNED DATE	**FROM: 05.05.2021**	**TO: 19.05.2021**	
ACTUAL CLASSES TAKEN	**FROM: 05.05.2021**	**TO:19.05.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	20/05/21	MON	**UNIX File APIs:** General File APIs.	Covered	
22	21/05/21	TUE	File and Record Locking.	Covered	
23	24/05/21	WED	Directory File APIs, Device File APIs.	Covered	
24	25/05/21	THU	FIFO File APIs, Symbolic Link File APIs.	Covered	
25	26/05/21	MON	UNIX Processes and Process Control	covered	
26	27/05/21	TUE	**The Environment of a UNIX Process:** Introduction, main function, Process Termination	Covered	
27	28/05/21	WED	Command-Line Arguments, Environment List, Memory Layout of a C Program,	Covered	
28	31/05/21	THU	Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions,	Covered	
29	01/06/21	MON	. getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork	Covered	
30	02/06/21	TUE	exit, wait, waitpid, wait3,wait4 Functions, Race Conditions, exec Functions	Covered	

SUMMARY

PLANNED DATE	**FROM: 20.05.2021**	**TO:02.06.2021**	
ACTUAL CLASSES TAKEN	**FROM: 20.05.2021**	**TO: 02.06.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	03/06/21	THU	Changing User IDs and Group IDs, Interpreter Files	Covered	
32	04/06/21	MON	system Function, Process Accounting	Covered	
33	07/06/21	TUE	User Identification, Process Times, I/O Redirection	Covered	
34	08/06/21	WED	**Overview of IPC Methods**, Pipes, popen, pclose	Covered	
35	09/06/21	THU	Functions, Coprocesses, FIFOs.	Covered	
36	10/06/21	TUE	System V IPC, Message Queues, Semaphores.	Covered	
37	11/06/21	WED	**Shared Memory**, Client-Server Properties, Stream Pipes,	Covered	
38	14/06/21	THU	Passing File Descriptors.	Covered	
39	15/06/21	WED	An Open Server-Version 1	Covered	
40	16/06/21	THU	Client-Server Connection Functions.	Covered	

SUMMARY

PLANNED DATE	**FROM:03.06.2021**	**TO: 16.06.2021**	
ACTUAL CLASSES TAKEN	**FROM: 03.06.2021**	**TO: 16.06.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
41	17/06/21	MON	**Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals	covered	
42	18/06/21	TUE	, signal, Signal Mask, sigaction	covered	
43	21/06/21	WED	The SIGCHLD Signal and the waitpid Function.	covered	
44	22/06/21	THU	The sigsetjmp and siglongjmp Functions.	covered	
45	23/06/21	TUE	Kill, Alarm, Interval Timers	covered	
46	24/06/21	WED	POSIX.lb Timers.	covered	
47	25/06/21	THU	Daemon Processes: Introduction	covered	
48	28/06/21	MON	Daemon Characteristics.	covered	
49	29/06/21	TUE	Coding Rules, Error Logging.	covered	
50	30/06/21	WED	Client-Server Model.		

SUMMARY

PLANNED DATE	**FROM: 17.06.2021**	**TO: 30.06.2021**	
ACTUAL CLASSES TAKEN	**FROM: 17.06.2021**	**TO: 30.06.2021**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:** ✓

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Sira Road, Tumakuru - 572 106, Karnataka.

DEPARTMENT OF CIVIL ENGINEERING

Semester: V *[As per Choice Based Credit System (CBCS) scheme]* **Year: 2021-22**

Course Title: **Environmental studies**	*Subject Code:* **18CIV59**
Total contact Hours: **15**	*Duration of Exam:* **03 Hrs.**
SEE Marks: **60**	*CIE marks:* **40**
Lesson plan author: **Ms. Niranjani B**	*Date:* **24/11/2021**
Checked by: **Dr. G Mahesh Kumar**	*Credits:* **01**

Course objectives:

1. Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components.
2. Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale

Course outcomes:

After a successful completion of the course, the student will be able to:

CO1: Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,

CO2: Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.

CO3: Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components.

CO4: Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.

Question paper pattern:

The Question paper will have 100 objective questions.

- Each question will be for 01 marks
- Student will have to answer all the questions in an OMR Sheet.
- The Duration of Exam will be 2 hours.

Program Objectives:

- Engineering knowledge
- Problem analysis
- Interpretation of data

Text books and Reference books.

Sl. No.	Title of the Book	Name of the Author/s	Name of the Publisher	Edition and Year
Textbooks				
1	Environmental Studies	Benny Joseph	Tata Mc Graw – Hill	2nd Edition, 2012
2	Environmental Studies	S M Prakash	Pristine Publishing House, Mangalore	3rd Edition, 2018
3	Environmental Studies – From Crisis to Cure	R. Rajagopalan	Oxford Publisher	2005
Reference Books				
1	Principals of Environmental Science and Engineering	Raman Sivakumar	Cengage learning, Singapur.	2nd Edition, 2005
2	Environmental Science – working with the Earth	G Tyler Miller Jr	Thomson Brooks /Cole.	11th Edition, 2006
3	Text Book of Environmental and Ecology	Pratiba Sing, Anoop Singhal, Piyush Malaviya	Acme Learning Pvt. Ltd. New Delhi.	1st Edition

Lesson Plan (Civil Engineering and Information Science)

Sl. No.	Date	Topics
		Module -1
1	10/12/21	**Ecosystems (Structure and Function):** Forest, Desert, Wetlands, Reverie, Oceanic and Lake.
2	10/12/21	**Biodiversity:** Types, Value; Hot spots; Threats and Conservation of biodiversity
3	10/12/21	Forest Wealth, and Deforestation
		Module -2
4	17/12/21	**Advances in Energy Systems** (Merits, Demerits, Global Status and Applications): Hydrogen, Solar, OTEC, Tidal and Wind.
5	17/12/21	**Natural Resource Management** (Concept and case-studies): Disaster Management, Sustainable Mining
6	17/12/21	Cloud Seeding, and Carbon Trading

		Module -3
7	24/12/21	**Environmental Pollution** (Sources, Impacts, Corrective and Preventive measures, Relevant Environmental Acts.
8	24/12/21	**Case-studies):** Surface and Ground Water Pollution; Noise pollution; Soil Pollution and Air Pollution.
9	24/12/21	**Waste Management & Public Health Aspects:** Bio-medical Wastes; Solid waste; Hazardous wastes; E-waste; Industrial and Municipal Sludge.
		Module -4
10	31/12/21	**Global Environmental Concerns (Concept, policies and case-studies):** Ground water depletion/recharging.
11	31/12/21	Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem in drinking water
12	31/12/21	Resettlement and rehabilitation of people, Environmental Toxicology
		Module -5
13	07/01/22	Latest Developments in Environmental Pollution Mitigation Tools (Concept and Applications): G.I.S. & Remote Sensing.
14	07/01/22	Environment Impact Assessment, Environmental Management Systems, ISO14001; Environmental Stewardship- NGOs.
15	07/01/22	Field work: Visit to an Environmental Engineering Laboratory or Green Building or Water Treatment Plant or Waste water treatment Plant; ought to be Followed by understanding of process and its brief documentation.

Ms. Niranjani B
Course Instructor

Dr. G Mahesh Kumar
HOD

Dr. Narendra Viswanath
Principal

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TUMKUR - 572106

DEPARTMENT OF CIVIL ENGINEERING

Semester: V *[As per Choice Based Credit System (CBCS) scheme]* **Year: 2021-22**

Course Title: **Environmental studies**	*Subject Code:* **18CIV59**
Total contact Hours: **15**	*Duration of Exam:* **03 Hrs.**
SEE Marks: **60**	*CIE marks:* **40**
Lesson plan author: **Ms. Niranjani B**	*Date:* **24/11/2021**
Checked by: **Dr. G Mahesh Kumar**	*Credits:* **01**

Course objectives:

1. Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components.
2. Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale

Course outcomes:

After a successful completion of the course, the student will be able to:

CO1: Understand the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale,

CO2: Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.

CO3: Demonstrate ecology knowledge of a complex relationship between biotic and a biotic components.

CO4: Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues.

Question paper pattern:

The Question paper will have 100 objective questions.

- Each question will be for 01 marks
- Student will have to answer all the questions in an OMR Sheet.
- The Duration of Exam will be 2 hours.

Program Objectives:

- Engineering knowledge
- Problem analysis
- Interpretation of data

Text books and Reference books.

Sl. No.	Title of the Book	Name of the Author(s)	Name of the Publisher	Edition and Year
Textbooks				
1	Environmental Studies	Benny Joseph	Tata Mc Graw – Hill.	2nd Edition. 2012
2.	Environmental Studies	S.M.Prakash	Pristine Publishing House. Mangalore	1st Edition 2018
3	Environmental Studies – From Crisis to Cure	R. Rajagopalan	Oxford Publisher	2005
Reference Books				
1	Principals of Environmental Science and Engineering	Raman Sivakumar	Cengage learning. Singapore.	2nd Edition. 2005
2.	Environmental Science – working with the Earth	G Tyler Miller Jr.	Thomson Brooks /Cole.	11th Edition. 2006
3	Text Book of Environmental and Ecology	Pratiba Sing, AanupSurabh PrasadMohapatra	Acme Learning Pvt. Ltd. New Delhi	1st Edition

Lesson Plan (Computer Science)

Sl. No.	Date	Topics
		Module -1
1	24/11/21	**Ecosystems (Structure and Function):** Forest, Desert, Wetlands, Reverie, Oceanic and Lake.
2	24/11/21	**Biodiversity:** Types, Value; Hot spots; Threats and Conservation of biodiversity
3	01/12/21	Forest Wealth, and Deforestation
		Module -2
4	01/12/21	**Advances in Energy Systems** (Merits, Demerits, Global Status and Applications): Hydrogen, Solar, OTEC, Tidal and Wind.
5	01/12/21	**Natural Resource Management** (Concept and case-studies): Disaster Management, Sustainable Mining
6	08/12/21	Cloud Seeding, and Carbon Trading

		Module -3
7	08/12/21	**Environmental Pollution** (Sources, Impacts, Corrective and Preventive measures, Relevant Environmental Acts.
8	08/12/21	**Case-studies):** Surface and Ground Water Pollution; Noise pollution; Soil Pollution and Air Pollution.
9	15/12/21	**Waste Management & Public Health Aspects:** Bio-medical Wastes; Solid waste; Hazardous wastes; E-wastes; Industrial and Municipal Sludge.
		Module -4
10	15/12/21	**Global Environmental Concerns (Concept, policies and case-studies):** Ground water depletion/recharging.
11	15/12/21	Climate Change; Acid Rain; Ozone Depletion; Radon and Fluoride problem in drinking water
12	22/12/21	Resettlement and rehabilitation of people, Environmental Toxicology
		Module -5
13	22/12/21	Latest Developments in Environmental Pollution Mitigation Tools (Concept and Applications): G.I.S. & Remote Sensing.
14	05/01/22	Environment Impact Assessment, Environmental Management Systems, ISO14001; Environmental Stewardship- NGOs.
15	12/01/22	Field work: Visit to an Environmental Engineering Laboratory or Green Building or Water Treatment Plant or Waste water treatment Plant; ought to be Followed by understanding of process and its brief documentation.

Ms. Niranjani B
Course Instructor

Dr. G Mukesh Kumar
HOD

Dr. Narendra Viswanath
Principal

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SHRIDEVI INSTITUTE OF
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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : III (AI) Year:2021-22

Subject Title: Computer Networks Lab	Subject Code: 18CSL57
Number of Contact Hours/Week:02/2 Total Number of Lab Contact Hours:36	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 04/10/2021
Checked by: Prof. Shamanka Swamy C V	Date: 04/10/2021

Objectives:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols

Outcomes:

- Analyze and Compare various networking protocols
- Demonstrate the working of different concepts of networking
- Implement, analyze and evaluate networking protocols in NS2 / NS3 and JAVA programming language

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	WEEK 1	Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Covered	
2	WEEK 2	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Covered	
3	WEEK 3	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Covered	
4	WEEK 4	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Covered	
5	WEEK 5	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Covered	
6	WEEK 6	Implement and study the performance of CDMA on NS2/NS3	Covered	

		Using stack called Call acct or equivalent environment		
8	WEEK 7	IA — 1	Done	
		PART – B		
9	WEEK 8	Write a program for error detecting code using CRC-CCITT (16-bits).	Covered	
10	WEEK 9	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Covered	
11	WEEK 10	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Covered	
12	WEEK 11	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Covered	
13	WEEK 12	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Covered	
14	WEEK 13	Write a program for congestion control using leaky bucket algorithm.	Covered	
15	WEEK 14	IA –2	done	

Dr. Charus K V
Staff in charge

Prof. Shanmukha Swamy C V
HOD, CSE

Dr. Narendra Viswanath
Principal

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TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : III (A2) Year:2021-22

Subject Title: Computer Networks Lab	Subject Code: 18CSL57
Number of Contact Hours/Week:02?2 Total Number of Lab Contact Hours 36	Duration of Exam: 03 Hrs
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 04/10/2021
Checked by: Prof. Shamruka Swamy C V	Date: 04/10/2021

Objectives:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols

Outcomes:

- Analyze and Compare various networking protocols
- Demonstrate the working of different concepts of networking
- Implement, analyze and evaluate networking protocols in NS2 / NS3 and JAVA programming language

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	WEEK 1	Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Covered	
2	WEEK 2	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Covered	
3	WEEK 3	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Covered	
4	WEEK 4	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Covered	
5	WEEK 5	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Covered	
6	WEEK 6	Implement and study the performance of CDMA on NS2/NS3	Covered	

		(Using stack called Call net) or equivalent environment		
8	WEEK 7	IA – 1	done	
		PART – B		
9	WEEK 8	Write a program for error detecting code using CRC-CCITT (16-bits).	Covered	
10	WEEK 9	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Covered	
11	WEEK 10	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Covered	
12	WEEK 11	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Covered	
13	WEEK 12	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Covered	
14	WEEK 13	Write a program for congestion control using leaky bucket algorithm.	Covered	
15	WEEK 14	IA –2	done	

Dr. Charan K V
Staff in charge

Prof. Shashanka Swamy C V
HOD- CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMAKURU - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

LECTURE PLAN

Semester : III (A3) Year:2021-22

Subject Title: Computer Networks Lab	Subject Code: 18CSL57
Number of Contact Hours/Week 02:2 Total Number of Lab Contact Hours 36	Duration of Exam: 03 Hrs.
Total exam marks: 80	Total I.A. marks: 40
Lesson plan author: Dr. Charan K.V	Date: 04/10/2021
Checked by: Prof. Shanmuka Swamy C V	Date: 04/10/2021

Objectives:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols

Outcomes:

- Analyze and Compare various networking protocols
- Demonstrate the working of different concepts of networking
- Implement, analyze and evaluate networking protocols in NS2 / NS3 and JAVA programming language

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	WEEK 1	Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Covered	
2	WEEK 2	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Covered	
3	WEEK 3	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Covered	
5	WEEK 4	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Covered	
6	WEEK 5	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Covered	
7	WEEK 6	Implement and study the performance of CDMA on NS2/NS3	Covered	

		(Using stack called Call rec) or equivalent environment		
8	WEEK 7	IA – 1	Covered	
		PART – B		
9	WEEK 8	Write a program for error detecting code using CRC-4CCITT (16-bits).	Covered	
10	WEEK 9	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Covered	
11	WEEK 10	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Covered	
12	WEEK 11	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Covered	
13	WEEK 12	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Covered	
14	WEEK 13	Write a program for congestion control using leaky bucket algorithm.	Covered	
15	WEEK 14	IA –2	Covered	

Dr. Charan K V
Staff in charge

Prof. Shanmuka Swamy C V
HOD- CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
Tumkur-572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (OCT-JAN 2021-22)

Name of the Staff : Chethan M S — *Sub.Code* : 18CSL57

Subject: COMPUTER NETWORK LABORATORY — *Class*: V Sem, B1-Batch

Course Learning Objectives:

This Course will enable students to:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	12/10/2021	**PART A** Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Completed	
02	19/10/2021	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Completed	
03	26/10/2021	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Completed	
04	02/11/2021	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Completed	
05	09/11/2021	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Completed	
06	16/11/2021	Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	Completed	
07	23/11/2021	Lab Internals I	Completed	
08	30/11/2021	**PART B (Implement the following in Java)** Write a program for error detecting code using CRC-CCITT (16-bits).	Completed	
09	07/12/2021	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Completed	
10	14/12/2021	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Completed	
11	21/12/2021	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Completed	
12	04/01/2022	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Completed	
13	11/01/2022	Write a program for congestion control using leaky bucket algorithm.	Completed	
14	18/01/2022	Lab Internals II	Completed	
15	25/01/2022	Revision	Completed	

Chethan M S
Staff Incharge

PRINCIPAL
SIET, TUMAKURU

Prof. C. C. Shanmukaswamy
HOD, CSE

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LAB PLAN (OCT-JAN 2021-22)

Name of the Staff : Chethan M S — *Sub.Code* : 18CSL57

Subject: COMPUTER NETWORK LABORATORY — *Class*: V Sem, B3-Batch

Course Learning Objectives:

This Course will enable students to:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	08/10/2021	**PART A** Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Completed	
02	22/10/2021	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Completed	
03	29/10/2021	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Completed	
04	12/11/2021	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Completed	
05	26/11/2021	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Completed	
06	03/12/2021	Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	Completed	
07	10/12/2021	Lab Internals I	Completed	
08	17/12/2021	**PART B (Implement the following in Java)** Write a program for error detecting code using CRC-CCITT (16-bits).	Completed	
09	24/12/2021	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Completed	
10	31/12/2022	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Completed	
11	07/01/2022	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Completed	
12	21/01/2022	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Completed	
13	21/01/2022	Write a program for congestion control using leaky bucket algorithm.	Completed	Extra
14	04/02/2022	Lab Internals II	Completed	

Chethan M S
Staff Incharge

PRINCIPAL
SIET, TUMAKURU

Prof. C V Shanmukaswamy
HOD, CSE

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN (OCT-JAN 2021-22)

Name of the Staff : Chethan M S *Sub.Code* : 18CSL57

Subject: COMPUTER NETWORK LABORATORY *Class*: V Sem, B2-Batch

Course Learning Objectives:

This Course will enable students to:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	13/10/2021	**PART A** Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Completed	
02	27/10/2021	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Completed	
03	10/11/2021	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Completed	
04	17/11/2021	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Completed	
05	24/11/2021	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Completed	
06	01/12/2021	Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	Completed	
07	08/12/2021	Lab Internals I	Completed	
08	15/12/2021	**PART B (Implement the following in Java)** Write a program for error detecting code using CRC-CCITT (16-bits).	Completed	
09	22/12/2021	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Completed	
10	05/01/2022	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Completed	
11	12/01/2022	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Completed	
12	17/01/2022	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Completed	
13	19/01/2022	Write a program for congestion control using leaky bucket algorithm.	Completed	
14	02/02/2022	Lab Internals II	Completed	

Chethan M S
Staff Incharge

PRINCIPAL
SIET, TUMKUR

Prof C V Shanmukaswamy
HOD, CSE

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LAB PLAN (OCT-JAN 2021-22)

Name of the Staff : Chethan M S — *Sub.Code* : 18CSL57

Subject: COMPUTER NETWORK LABORATORY — *Class*: V Sem, B2-Batch

Course Learning Objectives:

This Course will enable students to:

- Demonstrate operation of network and its management commands
- Simulate and demonstrate the performance of GSM and CDMA
- Implement data link layer and transport layer protocols.

Sl no.	Date	Planned portion	Executed Portion	Remarks
01	13/10/2021	**PART A** Implement three nodes point – to – point network with duplex links between them. Set the queue size, vary the bandwidth and find the number of packets dropped.	Completed	
02	27/10/2021	Implement transmission of ping messages/trace route over a network topology consisting of 6 nodes and find the number of packets dropped due to congestion.	Completed	
03	10/11/2021	Implement an Ethernet LAN using n nodes and set multiple traffic nodes and plot congestion window for different source / destination.	Completed	
04	17/11/2021	Implement simple ESS and with transmitting nodes in wire-less LAN by simulation and determine the performance with respect to transmission of packets.	Completed	
05	24/11/2021	Implement and study the performance of GSM on NS2/NS3 (Using MAC layer) or equivalent environment.	Completed	
06	01/12/2021	Implement and study the performance of CDMA on NS2/NS3 (Using stack called Call net) or equivalent environment.	Completed	
07	08/12/2021	Lab Internals I	Completed	
08	15/12/2021	**PART B (Implement the following in Java)** Write a program for error detecting code using CRC-CCITT (16-bits).	Completed	
09	22/12/2021	Write a program to find the shortest path between vertices using bellman-ford algorithm.	Completed	
10	05/01/2022	Using TCP/IP sockets, write a client – server program to make the client send the file name and to make the server send back the contents of the requested file if present.	Completed	
11	12/01/2022	Write a program on datagram socket for client/server to display the messages on client side, typed at the server side.	Completed	
12	17/01/2022	Write a program for simple RSA algorithm to encrypt and decrypt the data.	Completed	
13	19/01/2022	Write a program for congestion control using leaky bucket algorithm.	Completed	
14	02/02/2022	Lab Internals II	Completed	

Chethan M S
Staff Incharge

PRINCIPAL
SIET, TUMAKURU

Prof. C.V.Shanmukaswamy
HOD, CSE

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr. Renukaradhya P C | **Class: V – B1(TUESDAY)**
Course: DBMS LABORATORY WITH MINI PROJECT | **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	12/10/21	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	19/10/21	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	Covered
3	26/10/21	**Execution of Experiment-1**	
4.	02/11/21	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	Covered
5.	09/11/21	**Execution of Experiment-2**	
6.	16/11/21	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the	Covered

		result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	
9.	23/11/21	**Execution of Experiment-3**	Covered
8.	30/11/21	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	Covered
9.	07/12/21	**Execution of Experiment-4**	Executed
10.	28/12/21	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	Covered
11.	14/12/21	**Execution of Experiment -5, Project work**	Executed
12.	21/12/21	**Internals - II & Project work**	Covered
13.	04/01/21	**Project -work**	Covered
14.	11/01/21	**Internals III and evaluation of project work**	Executed

[Mr. Renukaradhya P C]
Staff-Incharge

[Prof .C.V Shanmukhaswamy]
Head, Dept of CSE

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr. Renukaradhya P C — **Class: V – B2[Wednesday]**
Course: DBMS LABORATORY WITH MINI PROJECT — **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	13/10/21	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	27/10/21	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	
3	10/11/21	**Execution of Experiment-1**	
4.	17/11/21	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	
5.	24/11/21	**Execution of Experiment-2**	
6.	01/12/21	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	

7.	01/12/21	**Execution of Experiment-3**	Extra
8.	08/12/21	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	Covered
9.	08/12/21	**Execution of Experiment-4**	Extra
10.	15/12/21	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department. 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	Covered
11.	15/12/21	**Execution of Experiment -5, Project work**	Extra Covered
12.	05/01/21	**Internals-II and Project work**	Covered
13.	12/01/21	**Project work**	Covered
14.	19/01/21	**Internals III and evaluation of project work**	Covered

[Mr. Renukaradhya P C]
Staff-Incharge

[Prof.C.V Shanmukaswamy]
HOD, Dept of CSE

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Course: DBMS LABORATORY WITH MINI PROJECT **Class: V** **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	1st week	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	2nd week	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No., Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	Conducted
3.	3rd week	**Execution of Experiment-1**	
4.	4th week	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	Conducted
5.	5th week	**Execution of Experiment-2**	
6.	6th week	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_Id, Act_Name, Act_Gender) DIRECTOR(Dir_Id, Dir_Name, Dir_Phone) MOVIES(Mov_Id, Mov_Title, Mov_Year, Mov_Lang, Dir_Id) MOVIE_CAST(Act_Id, Mov_Id, Role) RATING(Mov_Id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title.	Conducted

		5. Update rating of all movies directed by 'Steven Spielberg' to 5.	
7.	7th week	**Execution of Experiment-3**	Covered
8.	8th week	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	Covered
9.	9th week	**Execution of Experiment-4**	
10.	10th week	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	Covered
11.	11th week	**Execution of Experiment -5, Project work**	Covered
12.	12th week	**Internals-II and Project work**	Covered
13.	13th week	**Project work**	Covered
14.	15th week	**Internals III and evaluation of project work**	Covered

[Mr. Renukaradhya P C]
Staff-Incharge

[Prof .C.V Shanmukaswamy]
HOD, Dept of CSE

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DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr. Renukaradhya P C | **Class: V – B3[Friday]**
Course: DBMS LABORATORY WITH MINI PROJECT | **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	22/10/21	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	29/10/21	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	Completed
3	12/11/21	**Execution of Experiment-1**	Completed
4.	26/11/21	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	Completed
5.	03/12/21	**Execution of Experiment-2**	Completed
6.	10/12/21	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find	Completed

		the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5	
7.	10/12/21	**Execution of Experiment-3**	Extra
8.	17/12/21	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	Covered
9.	17/12/21	**Execution of Experiment-4**	Extra
10.	24/12/21	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department. 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	Covered
11.	24/12/21	**Execution of Experiment -5, Project work**	Extra Completed
12.	31/12/21	**Internals-II and Project work**	Covered
13.	07/12/21	**Project work**	Completed
14.	28/12/21	**Internals III and evaluation of project work**	Completed

[Mr. Renukaradhya P C]
Staff-Incharge

[Dr.Suhas G K]
HOD, Dept of CSE

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SJCT, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr Suthan R | **Class: V – A1(Monday)**
Course: DBMS LABORATORY WITH MINI PROJECT | **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	11/10/21	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	18/10/21	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	Covered
3	25/10/21	**Execution of Experiment-1**	Covered
4.	01/11/21	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	Covered
5.	08/11/21	**Execution of Experiment-2**	Covered
6.	15/11/21	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the	Covered

		result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	
7.	29/11/21	**Execution of Experiment-3**	covered
8.	06/12/21	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	covered
9.	13/12/21	**Execution of Experiment-4**	covered
10.	20/12/21	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department. 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	covered
11.	03/01/21	**Execution of Experiment -5, Project work**	covered
12.	10/01/21	**Internals – II & Project work**	covered
13.	17/01/21	**Project work**	covered
14.	24/01/21	**Internals III and evaluation of project work**	covered

[**Mr. Suthan R**]
Staff-Incharge

[**Prof .C.V Shanmukaswamy**]
HOD, Dept of CSE

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Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr Suthan R
Course: DBMS LABORATORY WITH MINI PROJECT

Class: V – A2[Wednesday]
Code: 18CSL58

Sl. No	Date	TOPIC	Remarks
1.	13/10/21	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	27/10/21	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	Covered
3	10/11/21	**Execution of Experiment-1**	Covered
4.	17/11/21	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	Covered
5.	24/11/21	**Execution of Experiment-2**	Covered
6.	01/12/21	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	Covered

7.	01/12/21	**Execution of Experiment-3**	Extra
8.	08/12/21	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	covered
9.	08/12/21	**Execution of Experiment-4**	Extra covered
10.	15/12/21	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	covered
11.	15/12/21	**Execution of Experiment -5, Project work**	Extra covered
12.	05/01/21	**Internals-II and Project work**	covered
13.	12/01/21	**Project work**	covered
14.	19/01/21	**Internals III and evaluation of project work**	covered

[Mr. Suthan R]
Staff-Incharge

PRINCIPAL
BIET, TUMAKURU

[Prof.C.Y. Mallikarjunaswamy]
HOD, Dept of CSE

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr Suthan R | **Class: V – A3[Friday]**
Course: DBMS LABORATORY WITH MINI PROJECT | **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	22/10/21	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	29/10/21	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	covered
3	12/11/21	**Execution of Experiment-1**	covered
4.	26/11/21	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	covered
5.	03/12/21	**Execution of Experiment-2**	covered
6.	10/12/21	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find	covered

		the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	
7.	10/12/21	**Execution of Experiment-3**	Extra Covered
8.	17/12/21	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	Covered
9.	17/12/21	**Execution of Experiment-4**	Extra Covered
10.	24/12/21	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department. 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	Covered
11.	24/12/21	**Execution of Experiment -5. Project work**	Extra Covered
12.	31/12/21	**Internals-II and Project work**	Covered
13.	07/12/21	**Project work**	Covered
14.	28/12/21	**Internals III and evaluation of project work**	Covered

[Mr. Nathan R]
Staff-Incharge

PRINCIPAL
SIET, TUMAKURU

[Prof .C.V Shanmukaswamy]
HOD, Dept of CSE

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Course: DBMS LABORATORY WITH MINI PROJECT **Class: V** **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	1st week	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	2nd week	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jan 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	Covered
3	3rd week	**Execution of Experiment-1**	Covered
4.	4th week	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	Covered
5.	5th week	**Execution of Experiment-2**	Covered
6.	6th week	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title.	Covered

		5. Update rating of all movies directed by 'Steven Spielberg' to 5.	
7.	7th week	**Execution of Experiment-3**	Covered
8.	8th week	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA = 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	Covered
9.	9th week	**Execution of Experiment-4**	Covered
10.	10th week	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is "Scott", either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	Covered
11.	11th week	**Execution of Experiment -5, Project work**	Covered
12.	12th week	**Internals-II and Project work**	Covered
13.	13th week	**Project work**	Covered
14.	15th week	**Internals III and evaluation of project work**	Covered

[Mr Suthan R]
Staff-Incharge

PRINCIPAL
BIET, TUMAKURU.

[Prof .C.V Shanmukaswamy]
HOD, Dept of CSE

SYSTEM SOFTWARE AND COMPILERS
(Effective from the academic year 2018 -2019)
SEMESTER – VI

Course Code	**18CS61**	**CIE Marks**	40
Number of Contact Hours/Week	3:2:0	**SEE Marks**	60
Total Number of Contact Hours	50	**Exam Hours**	03

CREDITS –4

Course Learning Objectives: This course (18CS61) will enable students to:

- Define System Software.
- Familiarize with source file, object file and executable file structures and libraries
- Describe the front-end and back-end phases of compiler and their importance to students

Module 1	**Contact Hours**
Introduction to System Software, Machine Architecture of SIC and SIC/XE. **Assemblers:** Basic assembler functions, machine dependent assembler features, machine independent assembler features, assembler design options. Basic Loader Functions **Text book 1: Chapter 1: 1.1,1.2,1.3.1,1.3.2, Chapter2 : 2.1 to 2.4, Chapter 3 ,3.1** **RBT: L1, L2, L3**	10
Module 2	
Introduction: Language Processors, The structure of a compiler, The evolution of programming languages, The science of building compiler, Applications of compiler technology. **Lexical Analysis:** The role of lexical analyzer, Input buffering, Specifications of token, recognition of tokens. **Text book 2:Chapter 1 1.1-1.5 Chapter 3: 3.1 – 3.4** **RBT: L1, L2, L3**	10
Module 3	
Syntax Analysis: Introduction, Context Free Grammars, Writing a grammar, Top Down Parsers, Bottom-Up Parsers **Text book 2: Chapter 4 4.1, 4.2 4.3 4.4 4.5** **RBT: L1, L2, L3**	10
Module 4	
Lex and Yacc –The Simplest Lex Program, Grammars, Parser-Lexer Communication, A YACC Parser, The Rules Section, Running LEX and YACC, LEX and Hand- Written Lexers, Using LEX - Regular Expression, Examples of Regular Expressions, A Word Counting Program. Using YACC – Grammars, Recursive Rules, Shift/Reduce Parsing, What YACC Cannot Parse, A YACC Parser - The Definitions Section, The Rules Section, The LEXER, Compiling and Running a Simple Parser, Arithmetic Expressions and Ambiguity. **Text book 3: Chapter 1,2 and 3,** **RBT: L1, L2, L3**	10
Module 5	
Syntax Directed Translation, Intermediate code generation, Code generation **Text book 2: Chapter 5.1, 5.2, 5.3, 6.1, 6.2, 8.1, 8.2** **RBT: L1, L2, L3**	10

Course Outcomes: The student will be able to :

- Explain system software
- Design and develop lexical analyzers, parsers and code generators
- Utilize lex and yacc tools for implementing different concepts of system software

Question Paper Pattern:
• The question paper will have ten questions. • Each full Question consisting of 20 marks • There will be 2 full questions (with a maximum of four sub questions) from each module. • Each full question will have sub questions covering all the topics under a module. • The students will have to answer 5 full questions, selecting one full question from each module.
Textbooks:
1. System Software by Leland L. Beck, D Manjula, 3rd edition, 2012 2. Alfred V Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ullman , Compilers-Principles, Techniques and Tools, Pearson, 2nd edition, 2007 3. Doug Brown, John Levine, Tony Mason, lex & yacc, O'Reilly Media, October 2012.
Reference Books:
1. Systems programming – Srimanta Pal , Oxford university press, 2016 2. System programming and Compiler Design, K C Louden, Cengage Learning 3. System software and operating system by D. M. Dhamdhere TMG 4. Compiler Design, K Muneeswaran, Oxford University Press 2013.

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SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -JUL 2022) MACRO SCHEDULE

SUBJECT	**System Software and Compiler Design**	**STAFF NAME**	**Dr. SUHAS G K**
SUBJECT CODE	18CS61	**SEM/SEC**	**VI(A & B)**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- **CO1:** Explain system software
- **CO2:** Design and develop lexical analyzers, parsers and code generators
- **CO3:** Utilize lex and yacc tools for implementing different concepts of system software

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1. 2. 3.	**12.04.2022 to 29.04.2022**	**Module- 2** Introduction: Language Processors, The structure of a compiler, The evaluation of programming languages, The science of building compiler, Applications of compiler technology. Lexical Analysis: The role of lexical analyzer, Input buffering, Specifications of token, recognition of token **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
1. 2.	**30.04.2022 to 17.05.2022**	**Module –4** Lex and Yacc - The Simplest Lex Program, Grammars, Parser-Lexer Communication, A YACC Parser, The Rules Section, Running LEX and YACC, LEX and Hand- Written Lexers, Using LEX - Regular Expression, Examples of Regular Expressions, A Word Counting Program, Using YACC – Grammars, Recursive Rules, Shift/Reduce Parsing, What YACC Cannot Parse, A YACC Parser - The Definition Section, The Rules Section, The LEXER, Compiling and Running a Simple Parser, Arithmetic Expressions and Ambiguity. **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube

3.	18.05.2022 to 31.05.2022	**Module -3** Syntax Analysis: Introduction, Context Free Grammars, Writing a grammar, Top Down Parsers, Bottom-Up Parsers **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
4.	01.06.2022 to 22.06.2022	**Module -5** Syntax Directed Translation, Intermediate code generation, Code generation **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
5.	22.06.2022 to 02.07.2022	**Module -1** Introduction to System Software, Machine Architecture of SIC and SIC/XE. Assemblers: Basic assembler functions, machine dependent assembler features, machine independent assembler features, assembler design options. Basic Loader Functions **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) MICROSCHEDULE

SUBJECT	System Software and Compiler Design	STAFF NAME	Dr. SUHAS G K
SUBJECT CODE	18CS61	SEM/SEC	VI / 'A'
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE II/IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	12/04/22	TUE	Introduction: Language Processors	✓	
2	13/04/22	WED	The structure of a compiler	✓	
3	16/04/22	SAT	The structure of a compiler-Continued	✓	
4	19/04/22	TUE	The structure of a compiler	✓	
5	20/04/22	WED	The role of lexical analyzer	✓	
6	22/04/22	FRI	The role of lexical analyzer-Continued	✓	
7	23/04/22	SAT	The role of lexical analyzer-continued	✓	
8	26/04/22	TUE	recognition of token by Parser/Syntax Analyzer	✓	
9	27/04/22	WED	recognition of token by Parser/Syntax Analyzer	✓	
10	29/04/22	FRI	Lex-yacc communication	✓	

SUMMARY

PLANNED DATE	12.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 12.04.2022	TO: 29.04.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ: -	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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TUMKUR - 572106

MODULE II/IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	Lex-yacc communication-Programs	✓	
12	03/05/22	TUE	Lex-yacc communication-Programs continued	✓	
13	04/05/22	WED	Lex-yacc communication-Programs continued	✓	
14	06/05/22	FRI	Lex-yacc communication-Programs	✓	
15	07/05/22	SAT	Input buffering	✓	
16	10/05/22	TUE	Transition Diagrams and regular expressions	✓	
17	11/05/22	WED	Transition Diagrams-Examples	✓	
18	13/05/22	FRI	Transition Diagrams-Examples	✓	
19	14/05/22	SAT	Revision	✓	
20	17/05/22	TUE	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 30.04.2022	TO: 17.05.2022	
ACTUAL CLASSES TAKEN	FROM: 30-04-2022	TO: 17-05-2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 02	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmukha Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHREE DEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572 106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/05/22	WED	Syntax Analysis: Introduction	✓	
22	24/05/22	TUE	Context Free Grammars	✓	
23	24/05/22	TUE	Writing a grammar,	✓	
24	25/05/22	WED	Top Down Parsers	✓	
25	25/05/22	WED	Top Down Parsers	✓	
26	27/05/22	FRI	Top Down Parsers.	✓	
27	27/05/22	FRI	Top Down Parsers	✓	
28	28/05/22	SAT	Bottom Up Parsers		
29	28/05/22	SAT	Bottom Up Parsers		
30	31/05/22	TUE	Bottom Up Parsers		

SUMMARY

PLANNED DATE	FROM: 18.05.2022	TO:31.05.2022	
ACTUAL CLASSES TAKEN	FROM: 18-05-22	TO: 31-05-22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION:
	QUIZ: 01	SEMINARS:	ANY OTHER:

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Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	01/06/22	WED	Syntax Directed Translation	✓	
32	03/06/22	FRI	Syntax Directed Translation-Attributes	✓	
33	04/06/22	SAT	Syntax Directed Translation-Examples	✓	
34	07/06/22	TUE	Intermediate code generation-RULES	✓	
35	08/06/22	WED	Intermediate code generation-QUADRUPLE ,TRIPLE	✓	
36	08/06/22	WED	Intermediate code generation-Examples Generation of 3 address code	✓	
37	14/06/22	TUE	Code generation	✓	
38	15/06/22	WED	Code generation-issues	✓	
39	21/06/22	TUE	Code generation	✓	
40	22/06/22	WED	Revision		

SUMMARY

PLANNED DATE	FROM: 01.06.2022	TO: 22.06.2022	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: 01	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	22/06/22	WED	Introduction to System Software	✓	
42	24/06/22	FRI	Machine Architecture of SIC	✓	
43	24/06/22	FRI	SIC/XE	✓	
44	25/06/22	SAT	Assemblers: Basic assembler functions	✓	
45	28/06/22	TUE	machine dependent assembler features	✓	
46	28/06/22	TUE	machine independent assembler features	✓	
47	29/06/22	WED	assembler design options	✓	
48	29/06/22	WED	Basic Loader Functions	✓	
49	02/07/22	SAT	Revision	✓	
50	02/07/22	SAT	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 22.06.2022	TO: 02.07.2022	
ACTUAL CLASSES TAKEN	FROM: 22.06.22	TO: 02.07.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ: 01	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SAHYADRI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) MICROSCHEDULE

SUBJECT	**System Software and Compiler Design**	**STAFF NAME**	Dr. SUHAS G K
SUBJECT CODE	18CS61	SEM/SEC	VI / A
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE III/V

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	12/04/22	TUE	Introduction: Language Processors	✓	
2	13/04/22	WED	The structure of a compiler	✓	
3	16/04/22	SAT	The structure of a compiler-Continued	✓	
4	19/04/22	TUE	The structure of a compiler	✓	
5	20/04/22	WED	The role of lexical analyzer	✓	
6	22/04/22	FRI	The role of lexical analyzer-Continued	✓	
7	23/04/22	SAT	The role of lexical analyzer-continued	✓	
8	26/04/22	TUE	recognition of token by Parser/Syntax Analyzer	✓	
9	27/04/22	WED	recognition of token by Parser/Syntax Analyzer	✓	
10	29/04/22	FRI	Lex-yacc communication	✓	

SUMMARY

PLANNED DATE	12.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 12.04.2022	TO: 29.04.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	OPTIONAL SESSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C T
HOD,CSE

HOD
Dept. of ISE
SIET, Tumkur-06

Dr. M
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II/IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	Lex-yacc communication-Programs	✓	
12	03/05/22	TUE	Lex-yacc communication-Programs continued	✓	
13	04/05/22	WED	Lex-yacc communication-Programs continued	✓	
14	06/05/22	FRI	Lex-yacc communication-Programs	✓	
15	07/05/22	SAT	Input buffering	✓	
16	10/05/22	TUE	Transition Diagrams and regular expressions	✓	
17	11/05/22	WED	Transition Diagrams-Examples	✓	
18	13/05/22	FRI	Transition Diagrams-Examples	✓	
19	14/05/22	SAT	Revision	✓	
20	17/05/22	TUE	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 30.04.2022	TO: 17.05.2022	
ACTUAL CLASSES TAKEN	FROM: 30.04.2022	TO: 17.05.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 02	OP DISCUSSION: Yes
	QUIZ: —	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C T
HOD,CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	IO MARKS
21	18/05/22	WED	Syntax Analysis: Introduction	✓	
22	24/05/22	TUE	Context Free Grammars	✓	
23	24/05/22	TUE	Writing a grammar.	✓	
24	25/05/22	WED	Top Down Parsers	✓	
25	25/05/22	WED	Top Down Parsers	✓	
26	27/05/22	FRI	Top Down Parsers.	✓	
27	27/05/22	FRI	Top Down Parsers	✓	
28	28/05/22	SAT	Bottom Up Parsers		
29	28/05/22	SAT	Bottom Up Parsers		
30	31/05/22	TUE	Bottom Up Parsers		

SUMMARY

PLANNED DATE	FROM: 18.05.2022	TO:31.05.2022	
ACTUAL CLASSES TAKEN	FROM: 18-05-22	TO: 31-05-22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 02	GP DISCUSSION:
	QUIZ: 01	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

PRINCIPAL
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INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	01/06/22	WED	Syntax Directed Translation	✓	
32	03/06/22	FRI	Syntax Directed Translation-Attributes	✓	
33	04/06/22	SAT	Syntax Directed Translation-Examples	✓	
34	07/06/22	TUE	Intermediate code generation-RULES	✓	
35	08/06/22	WED	Intermediate code generation-QUADRUPLE ,TRIPLE	✓	
36	08/06/22	WED	Intermediate code generation-Examples Generation of 3 address code	✓	
37	14/06/22	TUE	Code generation	✓	
38	15/06/22	WED	Code generation-issues	✓	
39	21/06/22	TUE	Code generation	✓	
40	22/06/22	WED	Revision		

SUMMARY

PLANNED DATE	FROM: 01.06.2022	TO: 22.06.2022	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	OF DISCUSSION:
	QUIZ: 01	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE I					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	22/06/22	WED	Introduction to System Software	✓	
42	24/06/22	FRI	Machine Architecture of SIC	✓	
43	24/06/22	FRI	SIC/XE	✓	
44	25/06/22	SAT	Assemblers: Basic assembler functions	✓	
45	28/06/22	TUE	machine dependent assembler features	✓	
46	28/06/22	TUE	machine independent assembler features	✓	
47	29/06/22	WED	assembler design options	✓	
48	29/06/22	WED	Basic Loader Functions	✓	
49	02/07/22	SAT	Revision	✓	
50	02/07/22	SAT	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 22.06.2022	TO: 02.07.2022	
ACTUAL CLASSES TAKEN	FROM: 22.06.22	TO: 02.07.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	OF DISCUSSION:
	QUIZ: 01	SEMINARS:	ANY OTHER:

Dr. Sahas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
BHOOMI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

DEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -JUL 2022) MACRO SCHEDULE

SUBJECT	System Software and Compiler Design	STAFF NAME	Dr. SUHAS G K
SUBJECT CODE	18CS61	SEM/SEC	VI(A & B)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1:** Explain system software
- **CO2:** Design and develop lexical analyzers, parsers and code generators
- **CO3:** Utilize lex and yacc tools for implementing different concepts of system software

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	12.04.2022 to 29.04.2022	**Module- 2** Introduction: Language Processors, The structure of a compiler, The evaluation of programming languages, The science of building compiler, Applications of compiler technology. Lexical Analysis: The role of lexical analyzer, Input buffering, Specifications of token, recognition of token **No. of Contact Sessions: 10**	OWN NOTES (3) Ep Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
2.	30.04.2022 to 17.05.2022	**Module –4** Lex and Yacc –The Simplest Lex Program, Grammars, Parser-Lexer Communication, A YACC Parser, The Rules Section, Running LEX and YACC, LEX and Hand- Written Lexers, Using LEX - Regular Expression, Examples of Regular Expressions, A Word Counting Program, Using YACC – Grammars, Recursive Rules, Shift/Reduce Parsing, What YACC Cannot Parse, A YACC Parser - The Definition Section, The Rules Section, The LEXER, Compiling and Running a Simple Parser, Arithmetic Expressions and Ambiguity. **No. of Contact Sessions: 10**	OWN NOTES (3) Ep Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube

3.	18.05.2022 to 31.05.2022	**Module -3** Syntax Analysis: Introduction, Context Free Grammars, Writing a grammar, Top Down Parsers, Bottom-Up Parsers **No. of Contact Sessions: 10**	OWN NOTES (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
4.	01.06.2022 to 22.06.2022	**Module -5** Syntax Directed Translation, Intermediate code generation, Code generation **No. of Contact Sessions: 10**	OWN NOTES (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
5.	22.06.2022 to 02.07.2022	**Module -1** Introduction to System Software, Machine Architecture of SIC and SIC/XE, Assemblers: Basic assembler functions, machine dependent assembler features, machine independent assembler features, assembler design options, Basic Loader Functions **No. of Contact Sessions: 10**	OWN NOTES (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube

Dr. Suhas G K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHREVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

DEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR -JUL 2022) MACRO SCHEDULE

SUBJECT	System Software and Compiler Design	STAFF NAME	Dr. SUHAS G K
SUBJECT CODE	18CS61	SEM/SEC	VI(A & B)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1:** Explain system software
- **CO2:** Design and develop lexical analyzers, parsers and code generators
- **CO3:** Utilize lex and yacc tools for implementing different concepts of system software

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1. 2.	12.04.2022 to 29.04.2022	**Module- 2** Introduction: Language Processors, The structure of a compiler, The evaluation of programming languages, The science of building compiler, Applications of compiler technology. Lexical Analysis: The role of lexical analyzer, Input buffering, Specifications of token, recognition of token **No. of Contact Sessions: 10**	**OWN NOTES** (51) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
1. 2.	30.04.2022 to 17.05.2022	**Module -4** Lex and Yacc - The Simplest Lex Program, Grammars, Parser-Lexer Communication, A YACC Parser, The Rules Section, Running LEX and YACC, LEX and Hand- Written Lexers, Using LEX - Regular Expression, Examples of Regular Expressions, A Word Counting Program, Using YACC – Grammars, Recursive Rules, Shift/Reduce Parsing, What YACC Cannot Parse, A YACC Parser - The Definition Section, The Rules Section, The LEXER, Compiling and Running a Simple Parser, Arithmetic Expressions and Ambiguity. **No. of Contact Sessions: 10**	**OWN NOTES** (51) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube

3.	18.05.2022 to 31.05.2022	**Module -3** Syntax Analysis: Introduction, Context Free Grammars, Writing a grammar, Top Down Parsers, Bottom-Up Parsers **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
4.	01.06.2022 to 22.06.2022	**Module -5** Syntax Directed Translation, Intermediate code generation, Code generation **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube
5.	22.06.2022 to 02.07.2022	**Module -1** Introduction to System Software, Machine Architecture of SIC and SIC/XE. Assemblers: Basic assembler functions, machine dependent assembler features, machine independent assembler features, assembler design options. Basic Loader Functions **No. of Contact Sessions: 10**	**OWN NOTES** (513) Lec-1: Compiler Design Syllabus Discussion for Competitive & College/University Exams - YouTube

Dr. Suhas G K
Staff Incharge

Prof Shivananda Swamy C V
HOD,CSE

Dr Varsha V
Principal
PRINCIPAL
SIET, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -JULY 2022) MACRO SCHEDULE

SUBJECT	COMPUTER GRAPHICS AND VISUALIZATION	STAFF NAME	VEENA N D
SUBJECT CODE	18CS62	SEM/SEC	VI "B"
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate Geometric transformations on both 2D and 3D objects.
- Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	12.04.2022 to 26.04.2022	**Module-1: Overview: Computer Graphics and OpenGL:** Computer Graphics:Basics of computer graphics, Application of Computer Graphics, Video Display Devices: Random Scan and Raster Scan displays, Input devices, graphics networks, graphics on the internet, graphics software. OpenGL: Introduction to OpenGL, coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL, OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions, OpenGL line attribute functions, Line drawing algorithms(DDA, Bresenham's), circle generation algorithms (Bresenham's). **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=0EAmvfB1bSA https://www.youtube.com/watch?v=cpwKSqkbn
2	27.04.2022 to 11.05.2022	**Module-2 Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas, OpenGL polygon fill area functions, fill area attributes, general scan line polygon fill algorithm, OpenGL fill-area attribute functions. 2DGeometric Transformations: Basic 2D Geometric Transformations, matrix representations and homogeneous coordinates, Inverse transformations, 2D composite transformations, other 2D transformations, raster methods for geometric transformations, OpenGL raster	https://www.youtube.com/watch?v=cpwKSqkbn

		transformations: OpenGL geometric transformations function, 2D viewing: 2D viewing pipeline, OpenGL 2D viewing functions. **No. of Contact Sessions: 10**	
3	**11.05.2022** **to** **25.05.2022**	**Module -3: Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping: clipping window, normalization and viewport transformations, clipping algorithms,2D point clipping, 2D line clipping algorithms: cohen-sutherland line clipping only -polygon fill area clipping: Sutherland-Hodgeman polygon clipping algorithm only.3DGeometric Transformations: 3D translation, rotation, scaling, composite 3D transformations, other 3D transformations, affine transformations, OpenGL geometric transformations functions. Color Models: Properties of light, color models, RGB and CMY color models. Illumination Models: Light sources, basic illumination models-Ambient light, diffuse reflection, specular and phong model. Corresponding openGL functions. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Clipping%2C3D+Geometric+Transformations%2C+Color+and+Illumination+Models
4	**26.05.2022** **to** **08.06.2022**	**Module -4 3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts, 3D viewing pipeline, 3D viewing coordinate parameters , Transformation from world to viewing coordinates, Projection transformation, orthogonal projections, perspective projections, The viewport transformation and 3D screen coordinates. OpenGL 3D viewing functions. Visible Surface Detection Methods: Classification of visible surface Detection algorithms, back face detection, depth buffer method and OpenGL visibility detection functions. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=3D+Viewing+and+Visible+Surface+Detection
5	**09.06.2022** **to** **23.06.2022**	**Module -5 Input& interaction, Curves and Computer Animation:** Input and Interaction: Input devices, clients and servers, Display Lists, Display Lists and Modelling, Programming Event Driven Input, Menus Picking, Building Interactive Models, Animating Interactive programs, Design of Interactive peugrams, Logic operations .Curved surfaces, quadric surfaces, OpenGL Quadric-Surface and Cubic-Surface Functions, Bezier Spline Curves, Bezier surfaces, OpenGL curve functions. Corresponding openGL functions. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Input%2C+Interaction%2C+Curves+and+Computer+Animation

TEXT BOOKS:

1. Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd / 4th Edition, Pearson Education,2011
2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL, 5th edition. Pearson Education, 2008

REFERENCE BOOKS:

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Huges Computer graphics with OpenGL: pearson education
2. Xiang, Plastock : Computer Graphics , sham's outline series, 2nd edition, TMG.
3. Kelvin Sung, Peter Shirley, steven Baer : Interactive Computer Graphics, concepts and applications, Cengage Learning
4. M M Raiker, Computer Graphics using OpenGL, Filip learning/Elsevier

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PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

FILE STRUCTURES (Effective from the academic year 2018 -2019) SEMESTER – VI			
Course Code	**18IS61**	**CIE Marks**	40
Number of Contact Hours/Week	3:2:0	**SEE Marks**	60
Total Number of Contact Hours	50	**Exam Hours**	03
CREDITS –4			

Course Learning Objectives: This course (18IS61) will enable students to:

- Explain the fundamentals of file structures and their management.
- Measure the performance of different file structures
- Organize different file structures in the memory.
- Demonstrate hashing and indexing techniques.

Module 1	**Contact Hours**
Introduction: File Structures: The Heart of the file structure Design, A Short History of File Structure Design, A Conceptual Toolkit; Fundamental File Operations: Physical Files and Logical Files, Opening Files, Closing Files, Reading and Writing, Seeking, Special Characters, The Unix Directory Structure, Physical devices and Logical Files, File-related Header Files, UNIX file System Commands; Secondary Storage and System Software: Disks, Magnetic Tape, Disk versus Tape; CD-ROM: Introduction, Physical Organization, Strengths and Weaknesses; Storage as Hierarchy, A journey of a Byte, Buffer Management, Input /Output in UNIX. **Fundamental File Structure Concepts, Managing Files of Records** : Field and Record Organization, Using Classes to Manipulate Buffers, Using Inheritance for Record Buffer Classes, Managing Fixed Length, Fixed Field Buffers, An Object-Oriented Class for Record Files, Record Access, More about Record Structures, Encapsulating Record Operations in a Single Class, File Access and File Organization. **RBT: L1, L2, L3**	10
Module 2	
Organization of Files for Performance, Indexing: Data Compression, Reclaiming Space in files, Internal Sorting and Binary Searching, Keysorting; What is an Index? A Simple Index for Entry-Sequenced File, Using Template Classes in C++ for Object I/O, Object-Oriented support for Indexed, Entry-Sequenced Files of Data Objects, Indexes that are too large to hold in Memory, Indexing to provide access by Multiple keys, Retrieval Using Combinations of Secondary Keys, Improving the Secondary Index structure: Inverted Lists, Selective indexes, Binding. **RBT: L1, L2, L3**	10
Module 3	
Consequential Processing and the Sorting of Large Files: A Model for Implementing Consequential Processes, Application of the Model to a General Ledger Program, Extension of the Model to include Mutiway Merging, A Second Look at Sorting in Memory, Merging as a Way of Sorting Large Files on Disk. **Multi-Level Indexing and B-Trees:** The invention of B-Tree, Statement of the problem, Indexing with Binary Search Trees; Multi-Level Indexing, B-Trees, Example of Creating a B-Tree, An Object-Oriented Representation of B-Trees, B-Tree Methods; Nomenclature, Formal Definition of B-Tree Properties, Worst-case Search Depth, Deletion, Merging and Redistribution, Redistribution during insertion; B* Trees, Buffering of pages; Virtual B-Trees; Variable-length Records and keys. **RBT: L1, L2, L3**	10

Module 4	
Indexed Sequential File Access and Prefix B + Trees: Indexed Sequential Access, Maintaining a Sequence Set, Adding a Simple Index to the Sequence Set, The Content of the Index: Separators Instead of Keys, The Simple Prefix B+ Tree and its maintenance, Index Set Block Size, Internal Structure of Index Set Blocks: A Variable-order B- Tree, Loading a Simple Prefix B+ Trees, B-Trees, B+ Trees and Simple Prefix B+ Trees in Perspective. **RBT: L1, L2, L3**	10
Module 5	
Hashing: Introduction, A Simple Hashing Algorithm, Hashing Functions and Record Distribution, How much Extra Memory should be used?, Collision resolution by progressive overflow, Buckets, Making deletions, Other collision resolution techniques, Patterns of record access. **Extendible Hashing:** How Extendible Hashing Works, Implementation, Deletion, Extendible Hashing Performance, Alternative Approaches. **RBT: L1, L2, L3**	10
Course Outcomes: The student will be able to : • Choose appropriate file structure for storage representation. • Identify a suitable sorting technique to arrange the data. • Select suitable indexing and hashing techniques for better performance to a given problem.	
Question Paper Pattern: • The question paper will have ten questions. • Each full Question consisting of 20 marks • There will be 2 full questions (with a maximum of four sub questions) from each module. • Each full question will have sub questions covering all the topics under a module. • The students will have to answer 5 full questions, selecting one full question from each module.	
Textbooks: 1. Michael J. Folk, Bill Zoellick, Greg Riccardi: File Structures-An Object Oriented Approach with C++, 3rd Edition, Pearson Education, 1998. **(Chapters 1 to 12 excluding 1.4, 1.5, 5.5, 5.6, 8.6, 8.7, 8.8)**	
Reference Books: 1. K.R. Venugopal, K.G. Srinivas, P.M. Krishnaraj: File Structures Using C++, Tata McGraw-Hill, 2008. 2. Scot Robert Ladd: C++ Components and Algorithms, BPB Publications, 1993. 3. Raghu Ramakrishan and Johannes Gehrke: Database Management Systems, 3rd Edition, McGraw Hill, 2003.	

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SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR -JUL 2022) MACROSCHEDULE

SUBJECT	FILE STRUCTURES	STAFF NAME	Mr. KIRAN GM
SUBJECT CODE	18IS61	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos:-The student will be able to :

- ✓ **CO1:** Choose appropriate file structure for storage representation.
- ✓ **CO2:** Identify a suitable sorting technique to arrange the data.
- ✓ **CO3:** Select suitable indexing and hashing techniques for better performance to a given problem.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	12.04.2022 to 29.04.2022	**Module- 1** **Introduction:** File Structures: The Heart of the file structure Design, A Short History of File Structure Design, A Conceptual Toolkit; Fundamental File Operations: Physical Files and Logical Files, Opening Files, Closing Files, Reading and Writing, Seeking, Special Characters, The Unix Directory Structure, Physical devices and Logical Files, File-related Header Files, UNIX file System Commands; Secondary Storage and System Software: Disks, Magnetic Tape, Disk versus Tape; CD-ROM: Introduction, Physical Organization, Strengths and Weaknesses; Storage as Hierarchy, A journey of a Byte, Buffer Management, Input /Output in UNIX. **Fundamental File Structure Concepts, Managing Files of Records :** Field and Record Organization, Using Classes to Manipulate Buffers, Using Inheritance for Record Buffer Classes, Managing Fixed Length, Fixed Field Buffers, An Object-Oriented Class for Record Files, Record Access, More about Record Structures, Encapsulating Record Operations in a Single Class, File Access and File Organization. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=cDQ34z0oqnQ https://www.youtube.com/watch?v=T3q6QeCQZQ&https://www.youtube.com/watch?v=IDyn8mrzpXw&list=PLDC2A0CBD2EC934C7 https://www.youtube.com/watch?v=vbnRrZgvEjY

2.	30.04.2022 to 17.05.2022	**Module -2** **Organization of Files for Performance, Indexing:** Data Compression, Reclaiming Space in files, Internal Sorting and Binary Searching, Keysorting; What is an Index? A Simple Index for Entry-Sequenced File, Using Template Classes in C++ for Object I/O, Object-Oriented support for Indexed, Entry-Sequenced Files of Data Objects, Indexes that are too large to hold in Memory, Indexing to provide access by Multiple keys, Retrieval Using Combinations of Secondary Keys, Improving the Secondary Index structure: Inverted Lists, Selective indexes, Binding. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=lGnZHgiU42Yhttps://www.youtube.com/watch?v=1_79AXkG4PYhttps://www.youtube.com/watch?v=K2LOJKp0I6E youtube.com/watch?v=1bSCNb0U4
3.	18.05.2022 to 31.05.2022	**Module -3** **Consequential Processing and the Sorting of Large Files:** A Model for Implementing Cosequential Processes, Application of the Model to a General Ledger Program, Extension of the Model to include Multiway Merging, A Second Look at Sorting in Memory, Merging as a Way of Sorting Large Files on Disk. **Multi-Level Indexing and B-Trees:** The invention of B-Tree, Statement of the problem, Indexing with Binary Search Trees; Multi-Level Indexing, B-Trees, Example of Creating a B-Tree, An Object-Oriented Representation of B-Trees, B-Tree Methods; Nomenclature, Formal Definition of B-Tree Properties, Worstcase Search Depth, Deletion, Merging and Redistribution, Redistribution during insertion; B* Trees, Buffering of pages; Virtual B-Trees; Variable-length Records and keys. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=nSvIrCWJXMhttps://www.youtube.com/watch?v=s_fQCoFYIf0https://www.youtube.com/watch?v=hi50cEpnEwg https://www.youtube.com/watch?v=JnrhCi-NvGI

4.	01.06.2022 to 22.06.2022	**Module -4** **Indexed Sequential File Access and Prefix B + Trees:** Indexed Sequential Access, Maintaining a Sequence Set, Adding a Simple Index to the Sequence Set, The Content of the Index: Separators Instead of Keys, The Simple Prefix B+ Tree and its maintenance, Index Set Block Size, Internal Structure of Index Set Blocks: A Variable-order B- Tree, Loading a Simple Prefix B+ Trees, B-Trees, B+ Trees and Simple Prefix B+ Trees in Perspective. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Xt3QiR4QOV8https://www.youtube.com/watch?v=BXU7HW_IjOwhttps://www.youtube.com/watch?v=i23vNeiT2kIthttps://www.youtube.com/user/elearningline
5.	22.06.2022 to 02.07.2022	**Module -5** **Hashing:** Introduction, A Simple Hashing Algorithm, Hashing Functions and Record Distribution, How much Extra Memory should be used?, Collision resolution by progressive overflow, Buckets, Making deletions, Other collision resolution techniques, Patterns of record access.**Extendible Hashing:** How Extendible Hashing Works, Implementation, Deletion, Extendible Hashing Performance, Alternative Approaches. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=8UfQ8qnwQEghttps://www.youtube.com/watch?v=QzKoSl7al4shttps://www.youtube.com/watch?v=QYCaeNz8cmYhttps://www.youtube.com/watch?v=SxXs6QUNIAhttps://www.youtube.com/watch?v=SxXs6QUNIAhttps://www.youtube.com/watch?v=ij5mnGn_JDw

Kiran G M
Staff Incharge

Dr.Suhas G K
HOD,ISE

Dr. Naresha Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) MICROSCHEDULE

SUBJECT	FILE STRUCTURES	STAFF NAME	Mr. KIRAN G M
SUBJECT CODE	18IS61	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	12/04/22	TUE	**Introduction:** File Structures: The Heart of the file structure Design, A Short History of File Structure Design.	Covered	
2	13/04/22	WED	A Conceptual Toolkit; Fundamental File Operations: Physical Files and Logical Files, Opening Files, Closing Files,	Covered	
3	16/04/22	SAT	Reading and Writing, Seeking, Special Characters.The Unix Directory Structure, Physical devices and Logical Files.	Covered	
4	19/04/22	TUE	File-related Header Files, UNIX file System Command,Secondary Storage and System Software: Disks,	Covered	
5	20/04/22	WED	Magnetic Tape, Disk versus Tape; CD-ROM: Introduction, Physical Organization, Strengths and Weaknesses	Covered	
6	22/04/22	FRI	Storage as Hierarchy, A journey of a Byte, Buffer Management, Input /Output in UNIX	Covered	
7	23/04/22	SAT	**Fundamental File Structure Concepts, Managing Files of Records :** Field and Record Organization, Using Classes to Manipulate Buffers	Covered	
8	26/04/22	TUE	Using Inheritance for Record Buffer Classes, Managing Fixed Length, Fixed Field Buffers,	Covered	
9	27/04/22	WED	An Object-Oriented Class for Record Files, Record Access, More about Record Structures,	Covered	
10	29/04/22	FRI	Encapsulating Record Operations in a Single Class, File Access and File Organization	Covered	

SUMMARY

PLANNED DATE	12.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 12/4/22	TO: 29/4/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

DrSuhas G K
HOD,ISE

PRINCIPAL
Dr. SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	**Organization of Files for Performance, Indexing:** Data Compression.	Covered	
12	03/05/22	TUE	Reclaiming Space in files	Covered	
13	04/05/22	WED	Internal Sorting and Binary Searching.	Covered	
14	06/05/22	FRI	Key sorting. What is an Index? A Simple Index for Entry-Sequenced File.	Covered	
15	07/05/22	SAT	Using Template Classes in C++ for Object I/O, Object-Oriented support for Indexed	Covered	
16	10/05/22	TUE	Entry Sequenced Files of Data Objects	Covered	
17	11/05/22	WED	Indexes that are too large to hold in Memory, Indexing to provide access by Multiple keys	Covered	
18	13/05/22	FRI	Retrieval Using Combinations of Secondary Keys	Covered	
19	14/05/22	SAT	Improving the Secondary Index structure: Inverted Lists	Covered	
20	17/05/22	TUE	Selective indexes, Binding.	Covered	

SUMMARY

PLANNED DATE	**FROM: 30.04.2022**	**TO: 17.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 30/4/22	**TO:** 17/5/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	IA 3:
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	QP DISCUSSION: ✓
	QUIZ:	**SEMINARS:**	ANY OTHER:

Kiran G M
Staff Incharge

DrSuhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/05/22	WED	**Consequential Processing and the Sorting of Large Files:** A Model for Implementing Co-sequential Processes.	Covered	
22	24/05/22	TUE	Application of the Model to a General Ledger Program, Extension of the Model to include Mutiway Merging.	Covered	
23	24/05/22	TUE	A Second Look at Sorting in Memory.	Covered	
24	25/05/22	WED	Merging as a Way of Sorting Large Files on Disk.	Covered	
25	25/05/22	WED	**Multi-Level Indexing and B-Trees:** The invention of B-Tree, Statement of the problem.	Covered	
26	27/05/22	FRI	Indexing with Binary Search Trees; Multi-Level Indexing.	Covered	
27	27/05/22	FRI	B-Trees, Example of Creating a B-Tree.	Covered	
28	28/05/22	SAT	An Object-Oriented Representation of B-Trees, B-Tree Methods; Nomenclature, Formal Definition of B-Tree Properties	Covered	
29	28/05/22	SAT	Worst case Search Depth, Deletion, Merging and Redistribution.	Covered	
30	31/05/22	TUE	Redistribution during insertion; B* Trees, Buffering of pages; Virtual B-Trees; Variable-length Records and keys.	Covered	

SUMMARY

PLANNED DATE	**FROM: 18.05.2022**	**TO:31.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 18/5/22	**TO:** 31/5/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr Suhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SRINIDHI INSTITUTE OF
ENGINEERING & TECHNOLOGY
YAMKUN - 501301

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	01/06/22	WED	**Indexed Sequential File Access and Prefix B + Trees:** Indexed Sequential Access.	Covered	
32	03/06/22	FRI	Maintaining a Sequence Set, Adding a Simple Index to the Sequence Set	Covered	
33	04/06/22	SAT	The Content of the Index: Separators Instead of Keys,	Covered	
34	07/06/22	TUE	The Simple Prefix B+ Tree and its maintenance	Covered	
35	08/06/22	WED	Index Set Block Size,	Covered	
36	08/06/22	WED	Internal Structure of Index Set Blocks: A Variable-order B- Tree	Covered	
37	14/06/22	TUE	Problem continued	Covered	
38	15/06/22	WED	Loading a Simple Prefix B+ Trees	Covered	
39	21/06/22	TUE	B-Trees,	Covered	
40	22/06/22	WED	B+ Trees and Simple Prefix B+ Trees in Perspective.	Covered	

SUMMARY

PLANNED DATE	**FROM: 01.06.2022**	**TO: 22.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 01/6/22	**TO:** 22/6/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**OF DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Kiran G M
Staff Incharge

Dr.Suhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHREE DEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	22/06/22	WED	**Hashing:** Introduction	Covered	
42	24/06/22	FRI	A Simple Hashing Algorithm,	Covered	
43	24/06/22	FRI	Hashing Functions and Record Distribution, How much Extra Memory should be used?	Covered	
44	25/06/22	SAT	Collision resolution by progressive overflow,	Covered	
45	28/06/22	TUE	Buckets, Making deletions,	Covered	
46	28/06/22	TUE	Other collision resolution techniques, Patterns of record access	Covered	
47	29/06/22	WED	**Extendible Hashing:** How Extendible Hashing Works,	Covered	
48	29/06/22	WED	Extendible Hashing Implementation	Covered	
49	02/07/22	SAT	Deletion, Extendible Hashing Performance	Covered	
50	02/07/22	SAT	Alternative Approaches	Covered	

SUMMARY

PLANNED DATE	**FROM: 22.06.2022**	**TO: 02.07.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 22/6/22	**TO:** 2/7/22	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	IA 3: ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	QP DISCUSSION: ✓
	QUIZ:	**SEMINARS:**	ANY OTHER:

Kiran G M
Staff Incharge

DrSuhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -JULY 2022) MICRO SCHEDULE

SUBJECT	COMPUTER GRAPHICS AND VISUALIZATION	STAFF NAME	VEENA N D
SUBJECT CODE	18CS62	SEM/SEC	VI "B"
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
SL No	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	12/04/22	TUE	**MODULE-1: Overview: Computer Graphics and OpenGL:** Computer Graphics:Basics of computer graphics. Application of Computer Graphics	Covered	
2	13/04/22	WED	Video Display Devices: Random Scan and Raster Scan displays	Covered	
3	13/04/22	WED	graphics software	Covered	
4	16/04/22	SAT	OpenGL: Introduction to OpenGL ,coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL	Covered	
5	19/04/22	TUE	OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions	Covered	
6	20/04/22	WED	OpenGL line attribute functions.	Covered	
7	20/04/22	WED	Line drawing algorithms(DDA)	Covered	
8	21/04/22	THU	Line drawing algorithms(Bresenham's)	Covered	
9	23/04/22	SAT	Line drawing algorithms(Bresenham's)	Covered	
10	26/04/22	TUE	circle generation algorithms (Bresenham's)	Covered	

SUMMARY

PLANNED DATE	FROM:11.04.2022	TO: 26.04.2022	
ACTUAL CLASSES TAKEN	FROM: 11/4/22	TO: 04/05/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	OF DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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ENGINEERING & TECHNOLO
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	27/04/22	WED	**Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas,	covered	
12	27/04/22	WED	OpenGL polygon fill area functions, fill area attributes	covered	
13	28/04/22	THU	general scan line polygon fill algorithm.	completed	
14	30/04/22	SAT	OpenGL fill-area attribute functions.	completed	
15	04/05/22	WED	2DGeometric Transformations: Basic 2D Geometric Transformations	Completed	
16	04/05/22	WED	matrix representations and homogeneous coordinates.	Completed	
17	05/05/22	THU	Inverse transformations, 2DComposite transformations.	completed	
18	07/05/22	SAT	other 2D transformations, raster methods for geometric transformations.	completed	
19	10/05/22	TUE	OpenGL raster transformations, OpenGL geometric transformations function, 2D viewing	Completed	
20	11/05/22	WED	2D viewing pipeline, OpenGL 2D viewing functions.	Completed	

SUMMARY

PLANNED DATE	**FROM: 27.04.2022**	**TO: 11.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 07/05/22	**TO:** 25/05/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	11/05/22	WED	**Module -3: Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping	✓	
22	11/05/22	WED	clipping window.	✓	
23	12/05/22	THU	normalization and viewport transformations.	✓	
24	14/05/22	SAT	clipping algorithms,2D point clipping.	✓	
25	17/05/22	TUE	2D line clipping algorithms: cohen-sutherland line clipping only -polygon fill area clipping-	✓	
26	18/05/22	WED	Sutherland-Hodgeman polygon clipping algorithm only	✓	
27	18/05/22	WED	3DGeometric Transformations: 3D translation, rotation, scaling	✓	
28	19/05/22	THU	composite 3D transformations, other 3D transformations, affine transformations	✓	
29	24/05/22	TUE	OpenGL geometric transformations functions, Color Models: Properties of light, color models, RGB and CMY color models, Illumination Models:	✓	
30	25/05/22	WED	Light sources, basic illumination models-Ambient light, diffuse reflection, specular and phong model, openGL functions	✓	

SUMMARY

PLANNED DATE	**FROM: 11.05.2022**	**TO:25.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 26/05/22	**TO:** 02/06/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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TUMKUR - 572106.

MODULE IV					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
31	26/05/22	THU	**3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts.	✓	
32	28/05/22	SAT	3D viewing pipeline	✓	
33	31/05/22	TUE	3D viewing coordinate parameters	✓	
34	01/06/22	WED	Transformation from world to viewing coordinates.	✓	
35	01/06/22	WED	Projection transformation. orthogonal projections.	✓	
36	02/06/22	THU	perspective projections.	✓	
37	04/06/22	SAT	The viewport transformation and 3D screen coordinates.	✓	
38	07/06/22	TUE	OpenGL 3D viewing functions. Visible Surface Detection Methods:	✓	
39	08/06/22	WED	Classification of visible surface Detection algorithms.	✓	
40	08/06/22	WED	back face detection, depth buffer method and OpenGL visibility detection functions	✓	

SUMMARY

PLANNED DATE	**FROM:26.05.2022**	**TO: 08.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 09/06/22	**TO:** 25/06/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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PRINCIPAL
BHOOMI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	09/06/22	THU	**Input& interaction, Curves and Computer Animation:** Input and Interaction:	✓	
42	11/06/22	SAT	Input devices, clients and servers, Display Lists	✓	
43	14/06/22	TUE	Display Lists and Modelling.	✓	
44	15/06/22	WED	Programming Event Driven Input.	✓	
45	15/06/22	WED	Menus Picking, Building Interactive Models.	✓	
46	16/06/22	THU	Animating Interactive programs, Design of Interactive programs	✓	
47	21/06/22	TUE	Logic operations. Curved surfaces, quadric surfaces	✓	
48	22/06/22	WED	OpenGL Quadric-Surface and Cubic-Surface Functions	✓	
49	22/06/22	WED	Bezier Spline Curves.	✓	
50	23/06/22	THU	Bezier surfaces, OpenGL curve functions, Corresponding openGL functions	✓	

SUMMARY

PLANNED DATE	**FROM: 09.06.2022**	**TO: 23.07.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 30/06/22	**TO:** 12/07/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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PRINCIPAL
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR -JUL 2022) MACROSCHEDULE

SUBJECT	SOFTWARE TESTING	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18IS62	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1:** Understand the fundamentals of Software Testing, software lifecycle and testing role.
- **CO2:** Understand specialized testing & Understand test design.
- **CO3:** Have the ability to Understand test management & Understand test automation & tools.
- **CO4:**Understand other skills in testing & getting to the next level in software testing.
- **CO5:**Explore the basic test issues while test the applications
- **CO6:**Identify and fix the major bugs & report to the developer.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	12.04.2022 to 29.04.2022	**Module- 1** **Basics of Software Testing:** Basic definitions, Software Quality, Requirements, Behaviour and Correctness, Correctness versus Reliability, Testing and Debugging, Test cases, Insights from a Venn diagram, Identifying test cases, Test-generation Strategies, Test Metrics, Error and fault taxonomies , Levels of testing, Testing and Verification, Static Testing. **Problem Statements:** Generalized pseudocode, The triangle problem, The NextDate function The commission problem, The SATM (Simple Automatic Teller Machine) problem, The currency converter, Saturn windshield wiper. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=cDQ34z0xqnQ https://www.youtube.com/watch?v=T3s6QxC0ZQ&https://www.youtube.com/watch?v=1Dyebsmzp Nw&list=PLDC2A9C8DDEC934C7 https://www.youtube.com/watch?v=vbsRrZevEjY
2.	30.04.2022 to 17.05.2022	**Module -2** **Functional Testing:** Boundary value analysis, Robustness testing, Worst-case testing, Robust Worst testing for triangle problem, Nextdate problem and commission problem, Equivalence classes, Equivalence test cases for the triangle problem, NextDate function, and the commission problem, Guidelines and observations, Decision tables, Test cases for the triangle problem, NextDate function, and the commission problem, Guidelines	https://www.youtube.com/watch?v=lGmZHqiU42Yhttps://www.youtube.com/watch?v=k_79AXbGtPYhttps://www.youtube.com/watch?v=K2LQfKp0681 youtube.com/watch?v=2wtWNbvLs

		and observations. **Fault Based Testing:** Overview, Assumptions in fault based testing, Mutation analysis, Fault-based adequacy criteria, Variations on mutation analysis. **No. of Contact Sessions: 10**	
3.	**18.05.2022** **to** **31.05.2022**	**Module -3** **Structural Testing:** Overview, Statement testing, Branch testing, Condition testing , Path testing, DD paths, Test coverage metrics, Basis path testing, guidelines and observations, Data –Flow testing: Definition-Use testing, Slicebased testing, Guidelines and observations. **Test Execution:** Overview of test execution, from test case specification to test cases, Scaffolding, Generic versus specific scaffolding, Test oracles, Self-checks as oracles, Capture and replay **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aSxhCWJXMhttps://www.youtube.com/watch?v=s_rQCnECYJIhttps://www.youtube.com/watch?v=8d50eEgeEwg https://www.youtube.com/watch?v=5rnbCf-SyGI
4.	**01.06.2022** **to** **22.06.2022**	**Module -4** **Process Framework** :Basic principles: Sensitivity, redundancy , Restriction, Partition, Visibility, Feedback, the quality process, Planning and monitoring, Quality goals, Dependability properties ,Analysis Testing, Improving the process, Organizational factors. **Planning and Monitoring the Process:** Quality and process, Test and analysis strategies and plans, Risk planning, monitoring the process, Improving the process, the quality team, **Documenting Analysis and Test:** Organizing documents, Test strategy document, Analysis and test plan, Test design specifications documents, Test and analysis reports. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=XE9AfR4HJVMhttps://www.youtube.com/watch?v=IBXU2HW_IIDshttps://www.youtube.com/watch?v=025zsNqr12chttps://www.youtube.com/user/elearningline

8.	22.06.2022 to 02.07.2022	**Module -5** **Integration and Component-Based Software Testing:** Overview, Integration testing strategies, Testing components and assemblies. System, Acceptance, Regression Testing: Overview, System testing, Acceptance testing, Usability, Regression testing, Regression test selection techniques, Test case prioritization and selective execution. **Levels of Testing, Integration Testing:** Traditional view of testing levels, Alternative life-cycle models, The SATM system, Separating integration and system testing, A closer look at the SATM system, Decomposition-based, call graph-based, Path-based integrations **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=8UF0Rqnw0Eghttps://www.youtube.com/watch?v=QvKn8lPn14s0https://www.youtube.com/watch?v=QYCauNvRenYhttps://www.youtube.com/watch?v=SvNd60UNlAhttps://www.youtube.com/watch?v=SvNd60UNlAhttps://www.youtube.com/watch?v=lj5rmGa_I8w

Suhan R
Staff Incharge

Dr Sidus G K
HOD,ISE

HOD
Dept. of ISE
SIET, Tumkur-06.

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) MICROSCHEDULE

SUBJECT	SOFTWARE TESTING	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18IS62	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	12/04/22	TUE	**Basics of Software Testing:** Basic definitions, Software Quality,	Covered	
2	13/04/22	WED	Requirements, Behaviour and Correctness,	Covered	
3	16/04/22	SAT	Correctness versus Reliability, Testing and Debugging	Covered	
4	19/04/22	TUE	Test cases, Insights from a Venn diagram, Identifying test cases, Test-generation Strategies,	Covered	
5	20/04/22	WED	Test Metrics, Error and fault taxonomies , Levels of testing, Testing and Verification, Static Testing	Covered	
6	22/04/22	FRI	**Problem Statements:** Generalized pseudocode,	Covered	
7	23/04/22	SAT	The triangle problem, The NextDate function The commission problem	Covered	
8	26/04/22	TUE	The SATM (Simple Automatic Teller Machine) problem	Covered	
9	27/04/22	WED	The currency converter,	Covered	
10	29/04/22	FRI	Saturn windshield wiper.	Covered	

SUMMARY

PLANNED DATE	12.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 12-04-2022	TO: 29-04-2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suthan R
Staff Incharge

Dr Suhas G K
HOD,ISE

HOD
Dept. of ISE
SIET, Tumkur

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	**Functional Testing:** Boundary value analysis, Robustness testing	Covered	
12	03/05/22	TUE	Worst-case testing, Robust Worst testing for triangle problem	Covered	
13	04/05/22	WED	Nextdate problem and commission problem	Covered	
14	06/05/22	FRI	Equivalence classes, Equivalence test cases for the triangle problem,	Covered	
15	07/05/22	SAT	NextDate function, and the commission problem,	Covered	
16	10/05/22	TUE	Guidelines and observations, Decision tables, Test cases for the triangle problem	Covered	
17	11/05/22	WED	NextDate function, and the commission problem,	Covered	
18	13/05/22	FRI	Guidelines and observations, **Fault Based Testing:** Overview, Assumptions in fault based testing	Covered	
19	14/05/22	SAT	Mutation analysis, Fault-based adequacy criteria	Covered	
20	17/05/22	TUE	Variations on mutation analysis	Covered	

SUMMARY

PLANNED DATE	**FROM: 30.04.2022**	**TO: 17.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 30.04.2022	**TO:** 17.05.2022	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Dr Suhas G K
HOD,ISE

HOD
Dept. of ISE
SIET, Tumkur-05.

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/05/22	WED	**Structural Testing:** Overview, Statement testing, Branch testing,	covered	
22	24/05/22	TUE	Condition testing , Path testing, DD paths,	covered	
23	24/05/22	TUE	Test coverage metrics, Basis path testing	covered	EXTRA
24	25/05/22	WED	Basis path testing, guidelines and observations,	covered	
25	25/05/22	WED	Data –Flow testing: Definition-Use testing	covered	EXTRA
26	27/05/22	FRI	Slicebased testing, Guidelines and observations,	covered	
27	27/05/22	FRI	**Test Execution:** Overview of test execution, from test case specification to test cases.	covered	EXTRA
28	28/05/22	SAT	Scaffolding, Generic versus specific scaffolding,	covered	
29	28/05/22	SAT	Test oracles, Self-checks as oracles,	covered	EXTRA
30	31/05/22	TUE	Capture and replay	covered	

SUMMARY

PLANNED DATE	FROM: 18.05.2022	TO:31.05.2022	
ACTUAL CLASSES TAKEN	FROM: 18.05.2022	TO: 31.05.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Suhan R
Staff Incharge

Dr Suhas G K
HOD,ISE

HOD
Dept. of ISE
SIET, Tumkur

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	01/06/22	WED	**Process Framework** :Basic principles: Sensitivity, redundancy	Covered	
32	03/06/22	FRI	Restriction, Partition, Visibility, Feedback,	covered	
33	04/06/22	SAT	the quality process, Planning and monitoring, Quality goals	covered	
34	07/06/22	TUE	Dependability properties ,Analysis Testing, Improving the process, Organizational factors.	covered	
35	08/06/22	WED	**Planning and Monitoring the Process:** Quality and process,	covered	
36	08/06/22	WED	Test and analysis strategies and plans, Risk planning,	covered	EXTRA
37	14/06/22	TUE	monitoring the process, Improving the process, the quality team	Covered	
38	15/06/22	WED	**Documenting Analysis and Test:** Organizing documents	covered	
39	21/06/22	TUE	Test strategy document, Analysis and test plan, Test design	covered	
40	22/06/22	WED	specifications documents, Test and analysis reports.	covered	

SUMMARY

PLANNED DATE	**FROM: 01.06.2022**	**TO: 22.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 01.06.22	**TO:** 22.06.22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** Sol ✓	**IA 3:** Sol ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Dr Suhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	22/06/22	WED	**Integration and Component-Based Software Testing:** Overview,	Covered	
42	24/06/22	FRI	Integration testing strategies, Testing components and assemblies	Covered	
43	24/06/22	FRI	System, Acceptance, Regression Testing:	Covered	EXTRA
44	25/06/22	SAT	Overview, System testing, Acceptance testing,	Covered	
45	28/06/22	TUE	Usability, Regression testing, Regression test selection techniques	Covered	
46	28/06/22	TUE	Test case prioritization and selective execution,	Covered	EXTRA
47	29/06/22	WED	**Levels of Testing, Integration Testing:** Traditional view of testing levels,	Covered	
48	29/06/22	WED	Alternative life-cycle models, The SATM system, Separating integration and system testing,	Covered	EXTRA
49	02/07/22	SAT	A closer look at the SATM system, Decomposition-based	Covered	
50	02/07/22	SAT	call graph-based, Path-based integration	Covered	EXTRA

SUMMARY

PLANNED DATE	**FROM: 22.06.2022**	TO: 02.07.2022	
ACTUAL CLASSES TAKEN	**FROM:** 22.06.22	TO: 02.07.22	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:**	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Suhan R
Staff Incharge

Dr Suhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
BHOOMI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

WEB TECHNOLOGY AND ITS APPLICATIONS (Effective from the academic year 2018 -2019) SEMESTER – VI			
Course Code	**18CS63**	**CIE Marks**	40
Number of Contact Hours/Week	3:2:0	**SEE Marks**	60
Total Number of Contact Hours	50	**Exam Hours**	03
CREDITS –4			

Course Learning Objectives: This course (18CS63) will enable students to:

- Illustrate the Semantic Structure of HTML and CSS
- Compose forms and tables using HTML and CSS
- Design Client-Side programs using JavaScript and Server-Side programs using PHP
- Infer Object Oriented Programming capabilities of PHP
- Examine JavaScript frameworks such as jQuery and Backbone

Module 1	**Contact Hours**
Introduction to HTML, What is HTML and Where did it come from?, HTML Syntax, Semantic Markup, Structure of HTML Documents, Quick Tour of HTML Elements, HTML5 Semantic Structure Elements, Introduction to CSS, What is CSS, CSS Syntax, Location of Styles, Selectors, The Cascade: How Styles Interact, The Box Model, CSS Text Styling **Textbook 1: Ch. 2, 3** **RBT: L1, L2, L3**	10
Module 2	
HTML Tables and Forms, Introducing Tables, Styling Tables, Introducing Forms, Form Control Elements, Table and Form Accessibility, Microformats, Advanced CSS: Layout, Normal Flow, Positioning Elements, Floating Elements, Constructing Multicolumn Layouts, Approaches to CSS Layout, Responsive Design, CSS Frameworks **Textbook 1: Ch. 4,5** **RBT: L1, L2, L3**	10
Module 3	
JavaScript: Client-Side Scripting, What is JavaScript and What can it do?, JavaScript Design Principles, Where does JavaScript Go?, Syntax, JavaScript Objects, The Document Object Model (DOM), JavaScript Events, Forms, Introduction to Server-Side Development with PHP, What is Server-Side Development, A Web Server's Responsibilities, Quick Tour of PHP, Program Control, Functions **Textbook 1: Ch. 6, 8** **RBT: L1, L2, L3**	10
Module 4	
PHP Arrays and Superglobals, Arrays, $_GET and $_POST Superglobal Arrays, $_SERVER Array, $_Files Array, Reading/Writing Files, PHP Classes and Objects, Object-Oriented Overview, Classes and Objects in PHP, Object Oriented Design, Error Handling and Validation, What are Errors and Exceptions?, PHP Error Reporting, PHP Error and Exception Handling **Textbook 1: Ch. 9, 10** **RBT: L1, L2, L3**	10
Module 5	
Managing State, The Problem of State in Web Applications, Passing Information via Query Strings, Passing Information via the URL Path, Cookies, Serialization, Session State, HTML5 Web Storage, Caching, Advanced JavaScript and jQuery, JavaScript Pseudo-Classes, jQuery Foundations, AJAX, Asynchronous File Transmission, Animation, Backbone	10

MVC Frameworks, XML Processing and Web Services. XML Processing, JSON, Overview of Web Services

Textbook 1: Ch. 13, 15,17

RBT: L1, L2, L3

Course Outcomes: The student will be able to :

- Adapt HTML and CSS syntax and semantics to build web pages
- Construct and visually format tables and forms using HTML and CSS
- Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically
- Appraise the principles of object oriented development using PHP
- Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features.

Question Paper Pattern:

- The question paper will have ten questions.
- Each full Question consisting of 20 marks
- There will be 2 full questions (with a maximum of four sub questions) from each module.
- Each full question will have sub questions covering all the topics under a module.
- The students will have to answer 5 full questions, selecting one full question from each module.

Textbooks:

1. Randy Connolly, Ricardo Hoar, **"Fundamentals of Web Development"**, 1st Edition, Pearson Education India. **(ISBN:**978-9332575271)

Reference Books:

1. Robin Nixon, **"Learning PHP, MySQL &JavaScript with jQuery, CSS and HTML5"**, 4th Edition, O'Reilly Publications, 2015. **(ISBN:**978-9352130153)
2. Luke Welling, Laura Thomson, **"PHP and MySQL Web Development"**, 5th Edition, Pearson Education, 2016. **(ISBN:**978-9332582736)
3. Nicholas C Zakas, **"Professional JavaScript for Web Developers"**, 3rd Edition, Wrox Wiley India, 2012. **(ISBN:**978-8126535088)
4. David Sawyer McFarland, **"JavaScript & jQuery: The Missing Manual"**, 1st Edition, O'Reilly/Shroff Publishers & Distributors Pvt Ltd, 2014

Mandatory Note:

Distribution of CIE Marks is a follows (Total 40 Marks)

- 20 Marks through IA Tests
- 20 Marks through practical assessmen

Maintain a copy of the report for verification during IJC visit.

Possible list of practicals:

1. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.
2. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.
3. Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.
4. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems:
   a. Parameter: A string
   b. Output: The position in the string of the left-most vowel

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OFCOMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -JAN 2022) MACRO SCHEDULE

SUBJECT	**WEB PROGRAMMING AND ITS APPLICATIONS**	**STAFF NAME**	**BASAVESHA D**
SUBJECT CODE	**18CS63**	**SEM/SEC**	**VI**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- Illustrate the Semantic Structure of HTML and CSS. Compose forms and tables using HTML and CSS
- Design Client-Side programs using JavaScript and Server-Side programs using PHP
- Infer Object Oriented Programming capabilities of PHP
- Examine JavaScript frameworks such as jQuery and Backbone
- Design the User Interface, design, menu creation ,windows creation and connection between menus and windows.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	04.04.2022 to 26.04.2022	**Module –1** Introduction to HTML, What is HTML and Where did it come from?, HTML Syntax, Semantic Markup, Structure of HTML Documents, Quick Tour of HTML Elements, HTML5 Semantic Structure Elements, Introduction to CSS, What is CSS, CSS Syntax, Location of Styles, Selectors, The Cascade: How Styles Interact, The Box Model, CSS Text Styling. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=3JuyLnvWjbIs https://www.youtube.com/watch?v=1cJccuCOnIs
2	27.04.2022 To 14.05.2022	**Module –2** HTML Tables and Forms, Introducing Tables, Styling Tables, Introducing Forms, Form Control Elements, Table and Form Accessibility, Microformats, Advanced CSS: Layout, Normal Flow, Positioning Elements, Floating Elements, Constructing Multicolumn Layouts, Approaches to CSS Layout, Responsive Design, CSS Frameworks. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=8NWJ5kbqGcM https://www.youtube.com/watch?v=6J2n9Qn6NJ
3	16.05.2022	**Module –3** JavaScript: Client-Side Scripting, What is JavaScript and What can it do?, JavaScript Design Principles, Where	https://www.youtube.com/watch?v=PHmqGCBUm4&list=PLsmtnMvtZmqdv2MLNMN1x1UB66633

	to 02.06.2022	does JavaScript Go?, Syntax, JavaScript Objects, The Document Object Model (DOM), JavaScript Events, Forms, Introduction to Server-Side Development with PHP, What is Server-Side Development, A Web Server"s Responsibilities, Quick Tour of PHP, Program Control, Functions. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=9A5ZH1f0Nfk
4	04.06.2022 To 23.06.2022	**Module–4** PHP Arrays and Superglobals, Arrays, $_GET and $_POST Superglobal Arrays, $_SERVER Array, $_Files Array, Reading/Writing Files, PHP Classes and Objects, Object-Oriented Overview, Classes and Objects in PHP, Object Oriented Design, Error Handling and Validation, What are Errors and Exceptions?, PHP Error Reporting, PHP Error and Exception Handling **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=BUG0bJhEkLk&t=1s https://www.youtube.com/watch?v=4EaK4z0WE_4g
5	25.06.2022 to 11.07.2022	**Module–5** Managing State, The Problem of State in Web Applications, Passing Information via Query Strings, Passing Information via the URL Path, Cookies, Serialization, Session State, HTML5 Web Storage, Caching, Advanced JavaScript and jQuery, JavaScript PseudoClasses, jQuery Foundations, AJAX, Asynchronous File Transmission, Animation, BackboneMVC Frameworks, XML Processing and Web Services, XML Processing, JSON, Overview of Web Services. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=82mvU33A035 https://www.youtube.com/watch?v=2-XHVbNkkBs&list=PLmH5AK8Omqn3F-0UkMuHuhEeb1Lm

Textbooks:

Randy Connolly, Ricardo Hoar, "Fundamentals of Web Development", 1 stEdition, Pearson Education India. (ISBN:978-9332575271).

Reference Books:

1. Robin Nixon, "Learning PHP, MySQL &JavaScript with jQuery, CSS and HTML5", 4 thEdition, O"Reilly Publications, 2015. (ISBN:978-9352130153)
2. Luke Welling, Laura Thomson, "PHP and MySQL Web Development", 5 th Edition, Pearson Education, 2016. (ISBN:978-9332582736)
3. Nicholas C Zakas, "Professional JavaScript for Web Developers", 3 rd Edition, Wrox/Wiley India, 2012. (ISBN:978-8126535088)
4. David Sawyer Mcfarland, "JavaScript & jQuery: The Missing Manual", 1 st Edition, O"Reilly/Shroff Publishers & Distributors Pvt Ltd, 2014

FACULTY

HOD

PRINCIPAL

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2022) MICRO SCHEDULE

SUBJECT	WEB TECHNOLOGY AND ITS APPLICATIONS	STAFF NAME	Mr. Basavesha D
SUBJECT CODE	18CS63	SEM/SEC	VI 'A"
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	4/4/22	TUE	**Module-1:** Introduction to HTML, What is HTML and Where did it come from?,	Covered	
2	5/4/22	WED	HTML Syntax, Semantic Markup, Structure of HTML Documents	Covered	
3	11/4/22	THU	Quick Tour of HTML Elements	Covered	
4	12/4/22	FRI	HTML5 Semantic Structure Elements	Covered	
5	13/4/22	TUE	Introduction to CSS,	Covered	
6	18/4/22	WED	What is CSS, CSS Syntax	Covered	
7	19/4/22	THU	Location of Styles,	Covered	
8	20/4/22	FRI	Selectors	Covered	
9	22/4/22	TUE	The Cascade: How Styles Interact	Covered	
10	22/4/22	WED	The Box Model	Covered	
11	25/4/22	THU	CSS Text Styling	Covered	

12	26/4/22	FRI	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	04.04.2022	TO: 26.04.2022	
ACTUAL CLASSES TAKEN	FROM: 4/4/22	TO: 26/4/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Bhavesha D
Staff In charge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
DEVI INSTITUTE OF
ENGG & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	27/4/22	TUE	**Module – 2:** HTML Tables	Covered	
14	28/4/22	WED	Forms, Introducing Tables	Covered	
15	29/4/22	THU	Styling Tables	Covered	
16	2/5/22	TUE	Introducing Forms, Form Control Elements, Table and Form Accessibility	Covered	
17	4/5/22	WED	Microformats	Covered	
18	5/5/22	THU	Advanced CSS: Layout, Normal Flow	Covered	
19	6/5/22	FRI	Positioning Elements, Floating Elements	Covered	
20	9/5/22	TUE	Constructing Multicolumn Layouts	Covered	
22	10/5/22	WED	Approaches to CSS Layout	Covered	
22	11/5/22	TUE	Responsive Design	Covered	
23	12/5/22	WED	CSS Frameworks	Covered	
24	13/5/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 27.04.2022	TO: 13.05.2022	
ACTUAL CLASSES TAKEN	FROM: 27/4/22	TO: 13/5/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓ (Sai)	IA 2: ✓ (Sai)	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. C V Sharmilakumari
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMAKURU - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	16/5/22	FRI	**Module – 3:** JavaScript: Client-Side Scripting	covered	
25	17/5/22	TUE	What is JavaScript and What can it do?,	Covered	
26	18/5/22	WED	JavaScript Design Principles, Where does JavaScript Go?,	Covered	
27	19/5/22	THU	Syntax, JavaScript Objects	Covered	
28	24/5/22	FRI	The Document Object Model (DOM), JavaScript Events Forms	Covered	
29	25/5/22	TUE	Introduction to Server-Side Development with PHP	Covered	
30	26/5/22	WED	What is Server-Side Development	Covered	
31	27/5/22	THU	A Web Server's Responsibilities	Covered	
32	30/5/22	FRI	Quick Tour of PHP	Covered	
33	31/5/22	TUE	Program Control	Covered	
34	1/6/22	WED	Functions	Covered	
35	2/6/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.05.2022**	TO:02.06.2022	
ACTUAL CLASSES TAKEN	**FROM:** 16/5/22	TO: 2/6/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. C V Shivakumar
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLO...
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MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	3/6/22	FRI	**Module** – 4: PHP Arrays and Superglobals	Covered	
37	06/6/22	THU	Arrays, $_GET and $_POST Superglobal Arrays	Covered	
38	07/6/22	FRI	$_SERVER Array, $_Files Array	Covered	
39	08/6/22	TUE	Reading/Writing Files, PHP Classes and Objects	Covered	
40	09/6/22	WED	Object-Oriented Overview	Covered	
41	13/6/22	THU	Classes and Objects in PHP	Covered	
42	14/6/22	FRI	Object Oriented Design.	Covered	
43	15/6/22	TUE	Error Handling and Validation	Covered	
44	16/6/22	WED	What are Errors and Exceptions?.	Covered	
45	22/6/22	THU	PHP Error Reporting	Covered	
46	22/6/22	FRI	PHP Error and Exception Handling	Covered	
47	23/6/22	TUE	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 03.06.2022**	TO: 23.06.2022	
ACTUAL CLASSES TAKEN	**FROM:** 03/06/22.	TO: 23/06/22.	
NUMBER OF CLASSES	**ALLOCATED:** 18	TAKEN: 12.	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. C V Shanmukhaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	24/6/22	THU	**Module – 5** Managing State, The Problem of State in Web Applications	covered	
49	27/6/22	FRI	Passing Information via Query String	covered	
50	28/6/22	FRI	Passing Information via the URI, Path, Cookies, Serialization	covered	EXTRA
51	29/6/22	TUE	Session State, HTML5 Web Storage	covered	
52	30/6/22	TUE	Caching, Advanced JavaScript and jQuery	covered	EXTRA
53	1/7/22	WED	JavaScript Pseudo-Classes, jQuery Foundations	covered	
54	04/7/22	WED	AJAX, Asynchronous File Transmission	covered	EXTRA
55	05/7/22	TUE	Animation,	covered	
56	06/7/22	TUE	Backbone MVC Frameworks	covered	EXTRA
57	07/7/22	WED	XML Processing and Web Services	covered	
58	08/7/22	WED	XML Processing, JSON,	covered	EXTRA
59	11/7/22	THU	Overview of Web Services.	covered	
60	12/7/22	FRI	Question paper discussion	covered	

SUMMARY

PLANNED DATE	**FROM: 24.06.22**	TO: 12.07.2022	
ACTUAL CLASSES TAKEN	**FROM:** 21/6/22.	TO: 12/7/22	
NUMBER OF CLASSES	**ALLOCATED:** 13	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:**	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. C Y Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
BHEEMA INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2022) MICRO SCHEDULE

SUBJECT	WEB TECHNOLOGY AND ITS APPLICATIONS	STAFF NAME	Mr. Basavesha D
SUBJECT CODE	18CS62	SEM/SEC	VI 'B'
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	4/4/22	TUE	**Module-1:** Introduction to HTML, What is HTML and Where did it come from?,	covered	
2	5/4/22	WED	HTML Syntax, Semantic Markup, Structure of HTML Documents	covered	
3	11/4/22	THU	Quick Tour of HTML Elements	covered	
4	12/4/22	FRI	HTML5 Semantic Structure Elements	covered	
5	13/4/22	TUE	Introduction to CSS,	Covered	
6	18/4/22	WED	What is CSS, CSS Syntax	covered	
7	19/4/22	THU	Location of Styles,	Covered	
8	20/4/22	FRI	Selectors	covered	
9	22/4/22	TUE	The Cascade: How Styles Interact	Covered	
10	23/4/22	WED	The Box Model	Covered	
11	25/4/22	THU	CSS Text Styling	Covered	

12	26/4/22	FRI	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	04.04.2022	TO: 26.04.2022	
ACTUAL CLASSES TAKEN	FROM: 4/4/22	TO: 26/04/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	27/4/22	TUE	**Module – 2:** HTML Tables	Covered	
14	28/4/22	WED	Forms, Introducing Tables	Covered	
15	30/4/22	THU	Styling Tables	Covered	
16	2/5/22	TUE	Introducing Forms, Form Control Elements, Table and Form Accessibility	Covered	
17	4/5/22	WED	Microformats	Covered	
18	5/5/22	THU	Advanced CSS: Layout, Normal Flow	Covered	
19	7/5/22	FRI	Positioning Elements, Floating Elements	Covered	
20	9/5/22	TUE	Constructing Multicolumn Layouts	Covered	
22	10/5/22	WED	Approaches to CSS Layout	Covered	
22	11/5/22	TUE	Responsive Design	Covered	
23	12/5/22	WED	CSS Frameworks	Covered	
24	14/5/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 27.04.2022	TO: 14.05.2022	
ACTUAL CLASSES TAKEN	FROM: 27/04/22	TO: 14/05/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓ (50%)	IA 2: ✓ (50%)	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
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MODULE III

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	16/5/22	FRI	**Module – 3:** JavaScript: Client-Side Scripting	covered	
25	17/5/22	TUE	What is JavaScript and What can it do?,	Covered	
26	18/5/22	WED	JavaScript Design Principles, Where does JavaScript Go?,	Covered	
27	19/5/22	THU	Syntax, JavaScript Objects	Covered	
28	24/5/22	FRI	The Document Object Model (DOM), JavaScript Events Forms	Covered	
29	25/5/22	TUE	Introduction to Server-Side Development with PHP	Covered	
30	26/5/22	WED	What is Server-Side Development	Covered	
31	28/5/22	THU	A Web Server's Responsibilities	Covered	
32	30/5/22	FRI	Quick Tour of PHP	Covered	
33	31/5/22	TUE	Program Control	Covered	
34	1/6/22	WED	Functions	Covered	
35	2/6/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 16.05.2022**	**TO:02.06.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 16/05/22	**TO:** 2/6/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Batavesha D
Staff Incharge

Prof. C.K. Shankaranarayana
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SIDDAGANGA INSTITUTE OF TECHNOLOGY
TUMKUR - 572103.

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	4/6/22	FRI	**Module – 4:** PHP Arrays and Superglobals	Covered	
37	6/6/22	THU	Arrays, $_GET and $_POST Superglobal Arrays	Covered	
38	7/6/22	FRI	$_SERVER Array, $_Files Array	Covered	
39	8/6/22	TUE	Reading/Writing Files, PHP Classes and Objects	Covered	
40	9/6/22	WED	Object-Oriented Overview	Covered	
41	13/6/22	THU	Classes and Objects in PHP	Covered	
42	14/6/22	FRI	Object Oriented Design.	Covered	
43	15/6/22	TUE	Error Handling and Validation	Covered	
44	16/6/22	WED	What are Errors and Exceptions?.	Covered	
45	22/6/22	THU	PHP Error Reporting	Covered	
46	22/6/22	FRI	PHP Error and Exception Handling	Covered	
47	23/6/22	TUE	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 04.06.2022	TO: 23.06.2022	
ACTUAL CLASSES TAKEN	FROM: 4/6/22	TO: 23/6/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. C V Sharmakumary
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
SL No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
48	23/6/22	THU	**Module – 5** Managing State. The Problem of State in Web Applications		
49	27/6/22	FRI	Passing Information via Query String		
50	28/6/22	FRI	Passing Information via the URL Path, Cookies, Serialization		EXTRA
51	29/6/22	TUE	Session State. HTML5 Web Storage		
52	30/6/22	TUE	Caching. Advanced JavaScript and jQuery		EXTRA
53	1/7/22	WED	JavaScript Pseudo-Classes. jQuery Foundations		
54	2/7/22	WED	AJAX. Asynchronous File Transmission		EXTRA
55	4/7/22	TUE	Animation.		
56	5/7/22	TUE	Backbone MVC Frameworks		EXTRA
57	6/7/22	WED	XML Processing and Web Services		
58	7/7/22	WED	XML Processing. JSON.		EXTRA
59	9/7/22	THU	Overview of Web Services.		
60	11/7/22	FRI	Question paper discussion		

SUMMARY

PLANNED DATE	FROM: 25.06.22	TO: 11.07.2022	
ACTUAL CLASSES TAKEN	FROM: 25/6/22	TO: 11/7/22	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572105.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) MICROSCHEDULE

SUBJECT	System Software and Compiler Design	STAFF NAME	Dr. SUHAS G K Mrs Kavyashree K
SUBJECT CODE	18CS61	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE II/IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	12/04/22	TUE	Introduction: Language Processors	✓	
2	13/04/22	WED	The structure of a compiler	✓	
3	16/04/22	SAT	The structure of a compiler-Continued	✓	
4	19/04/22	TUE	The structure of a compiler	✓	
5	20/04/22	WED	The role of lexical analyzer	✓	
6	22/04/22	FRI	The role of lexical analyzer-Continued	✓	
7	23/04/22	SAT	The role of lexical analyzer-continued	✓	
8	26/04/22	TUE	recognition of token by Parser/Syntax Analyzer	✓	
9	27/04/22	WED	recognition of token by Parser/Syntax Analyzer	✓	
10	29/04/22	FRI	Lex-yacc communication	✓	

SUMMARY

PLANNED DATE	12.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 12.04.2022	TO: 29.04.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmukha Swamy G V
HOD,CSE

Dr. Nanjundaswamy
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II/IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	Lex-yacc communication-Programs	✓	
12	03/05/22	TUE	Lex-yacc communication-Programs continued	✓	
13	04/05/22	WED	Lex-yacc communication-Programs continued	✓	
14	06/05/22	FRI	Lex-yacc communication-Programs	✓	
15	07/05/22	SAT	Input buffering	✓	
16	10/05/22	TUE	Transition Diagrams and regular expressions	✓	
17	11/05/22	WED	Transition Diagrams-Examples	✓	
18	13/05/22	FRI	Transition Diagrams-Examples	✓	
19	14/05/22	SAT	Revision	✓	
20	17/05/22	TUE	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 30.04.2022	TO: 17.05.2022	
ACTUAL CLASSES TAKEN	FROM: 30.04.2022	TO: 17.05.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓ 50%	IA 2: ✓ 80%	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 02	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suhas G K
Staff Incharge

Prof Shunmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMAKURU - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/05/22	WED	Syntax Analysis: Introduction	✓	
22	24/05/22	TUE	Context Free Grammars	✓	
23	24/05/22	TUE	Writing a grammar.	✓	
24	25/05/22	WED	Top Down Parsers	✓	
25	25/05/22	WED	Top Down Parsers	✓	
26	27/05/22	FRI	Top Down Parsers.	✓	
27	27/05/22	FRI	Top Down Parsers	✓	
28	28/05/22	SAT	Bottom Up Parsers	✓	
29	28/05/22	SAT	Bottom Up Parsers	✓	
30	31/05/22	TUE	Bottom Up Parsers	✓	

SUMMARY

PLANNED DATE	FROM: 18.05.2022	TO:31.05.2022	
ACTUAL CLASSES TAKEN	FROM: 18.05.2022	TO: 31.05.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K & Kavyashree
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
PRINCIPAL
Siddaganga INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572103

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	01/06/22	WED	Syntax Directed Translation	✓	
32	03/06/22	FRI	Syntax Directed Translation-Attributes	✓	
33	04/06/22	SAT	Syntax Directed Translation-Examples	✓	
34	07/06/22	TUE	Intermediate code generation-RULES	✓	
35	08/06/22	WED	Intermediate code generation-QUADRUPLE ,TRIPLE	✓	
36	08/06/22	WED	Intermediate code generation-Examples Generation of 3 address code	✓	
37	14/06/22	TUE	Code generation	✓	
38	15/06/22	WED	Code generation-issues	✓	
39	21/06/22	TUE	Code generation	✓	
40	22/06/22	WED	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 01.06.2022	TO: 22.06.2022	
ACTUAL CLASSES TAKEN	FROM: 1 Jun 22	TO: 22.06.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION ✓
	QUIZ: 01	SEMINARS:	ANY OTHER:

Mrs Kavyashree K
Staff Incharge

Prof Shanmukha Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SRINIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE I					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	22/06/22	WED	Introduction to System Software	✓	
42	24/06/22	FRI	Machine Architecture of SIC	✓	
43	24/06/22	FRI	SIC/XE	✓	
44	25/06/22	SAT	Assemblers: Basic assembler functions	✓	
45	28/06/22	TUE	machine dependent assembler features	✓	
46	28/06/22	TUE	machine independent assembler features	✓	
47	29/06/22	WED	assembler design options	✓	
48	29/06/22	WED	Basic Loader Functions	✓	
49	02/07/22	SAT	Revision	✓	
50	02/07/22	SAT	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 22.06.2022	TO: 02.07.2022	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: 01	SEMINARS:	ANY OTHER:

Mrs Kavyashree K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	13/06/22	MON	**Input& interaction, Curves and Computer Animation:** Input and Interaction.	✓	
42	14/06/22	TUE	Input devices, clients and servers. Display Lists	✓	
43	15/06/22	WED	Display Lists and Modelling.	✓	
44	16/06/22	MON	Programming Event Driven Input.	✓	
45	21/06/22	TUE	Menus Picking, Building Interactive Models.	✓	
46	22/06/22	WED	Animating Interactive programs. Design of Interactive programs	✓	
47	23/06/22	THU	Logic operations Curved surfaces, quadric surfaces	✓	
48	25/06/22	SAT	OpenGL Quadric-Surface and Cubic-Surface Functions	✓	
49	27/06/22	MON	Bezier Spline Curves.	✓	
50	28/06/22	TUE	Bezier surfaces, OpenGL curve functions. Corresponding openGL functions	✓	

SUMMARY

PLANNED DATE	FROM: 13.06.2022	TO: 28.06.2022	
ACTUAL CLASSES TAKEN	FROM: 06/07/22	TO: 13/07/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	28/05/22	SAT	**3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts.	✓	
32	30/05/22	MON	3D viewing pipeline	✓	
33	31/05/22	TUE	3D viewing coordinate parameters	✓	
34	01/06/22	WED	Transformation from world to viewing coordinates.	✓	
35	02/06/22	THU	Projection transformation, orthigonal projections.	✓	
36	04/06/22	SAT	perspective projections.	✓	
37	06/06/22	MON	The viewport transformation and 3D screen coordinates.	✓	
38	07/06/22	TUE	OpenGL 3D viewing functions. Visible Surface Detection Methods:	✓	
39	08/06/22	WED	Classification of visible surface Detection algorithms.	✓	
40	09/06/22	THU	back face detection, depth buffer method and OpenGL visibility detection functions	✓	

SUMMARY

PLANNED DATE	FROM:28.05.2022	TO: 09.06.2022	
ACTUAL CLASSES TAKEN	FROM: 14/06/22	TO: 04/07/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	11/05/22	WED	**Module -3: Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping		
22	12/05/22	THU	clipping window.		
23	14/05/22	SAT	normalization and viewport transformations.		
24	16/05/22	MON	clipping algorithms.2D point clipping.		
25	17/05/22	TUE	2D line clipping algorithms: cohen-sutherland line clipping only -polygon fill area clipping:.		
26	18/05/22	WED	Sutherland-Hodgeman polygon clipping algorithm only		
27	19/05/22	THU	3DGeometric Transformations: 3D translation, rotation, scaling		
28	24/05/22	TUE	composite 3D transformations, other 3D transformations, affine transformations		
29	25/05/22	WED	OpenGL geometric transformations functions, Color Models: Properties of light, color models, RGB and CMY color models.		
30	26/05/22	THU	Illumination Models: Light sources, basic illumination models-Ambient light, diffuse reflection, specular and phong model, openGL functions		

SUMMARY

PLANNED DATE	**FROM: 11.05.2022**	**TO:26.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 30/05/22	**TO:** 13/06/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	26/04/22	TUE	**Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas.	✓	
12	27/04/22	WED	OpenGL polygon fill area functions, fill area attributes	✓	
13	28/04/22	FRI	general scan line polygon fill algorithm.	✓	
14	30/04/22	SAT	OpenGL fill-area attribute functions.	✓	
15	02/05/22	MON	2DGeometric Transformations: Basic 2D Geometric Transformations	✓	
16	04/05/22	WED	matrix representations and homogeneous coordinates.	✓	
17	05/05/22	THU	inverse transformations, 2DComposite transformations, other 2D transformations, raster methods for geometric transformations.	✓	
18	07/05/22	SAT	OpenGL raster transformations.	✓	
19	09/05/22	MON	OpenGL geometric transformations function, 2D viewing	✓	
20	10/05/22	TUE	2D viewing pipeline, OpenGL 2D viewing functions.	✓	

SUMMARY

PLANNED DATE	**FROM: 26.04.2022**	**TO: 10.05.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 09/5/22	**TO:** 23/05/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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SUMMARY

PLANNED DATE	FROM:11.04.2022	TO: 25.04.2022	
ACTUAL CLASSES TAKEN	FROM: 18/4/22	TO: 05/05/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -JULY 2022) MICRO SCHEDULE

SUBJECT	COMPUTER GRAPHICS AND VISUALIZATION	STAFF NAME	VEENA N D
SUBJECT CODE	18CS62	SEM/SEC	VI "A"
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	11/04/22	MON	**MODULE-1: Overview: Computer Graphics and OpenGL:** Computer Graphics Basics of computer graphics, Application of Computer Graphics	Covered	
2	12/04/22	TUE	Video Display Devices: Random Scan and Raster Scan displays	Covered	
3	13/04/22	WED	graphics software	Covered	
4	16/04/22	SAT	OpenGL: Introduction to OpenGL, coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL	Covered	
5	18/04/22	MON	OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions	Covered	
6	19/04/22	TUE	OpenGL line attribute functions,	Covered	
7	20/04/22	WED	Line drawing algorithms(DDA)	Covered	
8	21/04/22	FRI	Line drawing algorithms(Bresenham's)	Covered	
9	23/04/22	SAT	Line drawing algorithms(Bresenham's)	Covered	
10	25/04/22	MON	circle generation algorithms (Bresenham's)	Covered	

TEXT BOOKS:

1. Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd / 4th Edition, Pearson Education,2011
2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL, 5th edition, Pearson Education, 2008

REFERENCE BOOKS:

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Huges Computer graphics with OpenGL: pearson education
2. Xiang, Plastock : Computer Graphics , shum's outline series, 2nd edition, TMG.
3. Kelvin Sung, Peter Shirley, steven Baer : Interactive Computer Graphics, concepts and applications, Cengage Learning
4. M M Raiker, Computer Graphics using OpenGL, Filip learning/Elsevier

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		transformations, OpenGL geometric transformations function, 2D viewing: 2D viewing pipeline, OpenGL 2D viewing functions. **No. of Contact Sessions: 10**	
3	**11.05.2022** **to** **26.05.2022**	**Module -3: Clipping,3D Geometric Transformations, Color and Illumination Models:** Clipping: clipping window, normalization and viewport transformations, clipping algorithms,2D point clipping, 2D line clipping algorithms: cohen-sutherland line clipping only -polygon fill area clipping: Sutherland-Hodgeman polygon clipping algorithm only.3DGeometric Transformations: 3D translation, rotation, scaling, composite 3D transformations, other 3D transformations, affine transformations, OpenGL geometric transformations functions. Color Models: Properties of light, color models, RGB and CMY color models. Illumination Models: Light sources, basic illumination models-Ambient light, diffuse reflection, specular and phong model. Corresponding openGL functions. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=3.Opengl%3A+3D+Transformations+Clipping+and+Illumination+Models
4	**28.05.2022** **to** **09.06.2022**	**Module -4 3D Viewing and Visible Surface Detection:** 3DViewing:3D viewing concepts, 3D viewing pipeline, 3D viewing coordinate parameters , Transformation from world to viewing coordinates, Projection transformation, orthogonal projections, perspective projections, The viewport transformation and 3D screen coordinates. OpenGL 3D viewing functions. Visible Surface Detection Methods: Classification of visible surface Detection algorithms, back face detection, depth buffer method and OpenGL visibility detection functions. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=3D+Viewing+and+Visible+Surface+Detection
5	**13.06.2022** **to** **28.06.2022**	**Module -5 Input& interaction, Curves and Computer Animation:** Input and Interaction: Input devices, clients and servers, Display Lists, Display Lists and Modelling, Programming Event Driven Input, Menus Picking, Building Interactive Models, Animating Interactive programs, Design of Interactive programs, Logic operations .Curved surfaces, quadric surfaces, OpenGL Quadric-Surface and Cubic-Surface Functions, Bezier Spline Curves, Bezier surfaces, OpenGL curve functions. Corresponding openGL functions. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=InputOr+interaction%2C+Curves+and+Computer+Animation

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -JULY 2022) MACRO SCHEDULE

SUBJECT	**COMPUTER GRAPHICS AND VISUALIZATION**	**STAFF NAME**	**VEENA N D**
SUBJECT CODE	**18CS62**	**SEM/SEC**	**VI "A"**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Co

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate Geometric transformations on both 2D and 3D objects.
- Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	**11.04.2022 to 25.04.2022**	**Module-1: Overview: Computer Graphics and OpenGL:** Computer Graphics:Basics of computer graphics, Application of Computer Graphics, Video Display Devices: Random Scan and Raster Scan displays, Input devices, graphics networks, graphics on the internet, graphics software. OpenGL: Introduction to OpenGL ,coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL, OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions, OpenGL line attribute functions, Line drawing algorithms(DDA, Bresenham's), circle generation algorithms (Bresenham's). **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=48xuUGSA https://www.youtube.com/watch?v=aeyNlqhw
2	**26.04.2022 to 10.05.2022**	**Module-2 Fill area Primitives, 2D Geometric Transformations and 2D viewing:** Fill area Primitives: Polygon fill-areas, OpenGL polygon fill area functions, fill area attributes, general scan line polygon fill algorithm, OpenGL fill-area attribute functions. 2DGeometric Transformations: Basic 2D Geometric Transformations, matrix representations and homogeneous coordinates, Inverse transformations, 2DComposite transformations, other 2D transformations, raster methods for geometric transformations, OpenGL raster	https://www.youtube.com/watch?v=gqwy-Ulb-nw&list=PLbRMhDVUMngcx8VzwiRDpXr-JCn9QSNx9

pipeline, 3D viewing coordinate parameters , Transformation from world to viewing coordinates, Projection transformation, orthogonal projections, perspective projections, The viewport transformation and 3D screen coordinates. OpenGL 3D viewing functions. Visible Surface Detection Methods: Classification of visible surface Detection algorithms, depth buffer method only and OpenGL visibility detection functions. **Text-1:Chapter: 7-1 to 7-10(Excluding 7-7), 9-1,9-3, 9-14** **RBT: L1, L2, L3**	
Module 5	
Input& interaction, Curves and Computer Animation: Input and Interaction: Input devices, clients and servers, Display Lists, Display Lists and Modeling, Programming Event Driven Input, Menus Picking, Building Interactive Models, Animating Interactive programs, Design of Interactive programs, Logic operations .Curved surfaces, quadric surfaces, OpenGL Quadric-Surface and Cubic-Surface Functions, Bezier Spline Curves, Bezier surfaces, OpenGL curve functions. Corresponding openGL functions. **Text-1:Chapter :8-3 to 8-6 (Excluding 8-5),8-9,8-10,8-11,3-8,8-18,13-11,3-2,13-3,13-4,13-10** **Text-2:Chapter 3: 3-1 to 3.11: Input& interaction** **RBT: L1, L2, L3**	10

Course Outcomes: The student will be able to :

- Design and implement algorithms for 2D graphics primitives and attributes.
- Illustrate Geometric transformations on both 2D and 3D objects.
- Apply concepts of clipping and visible surface detection in 2D and 3D viewing, and Illumination Models.
- Decide suitable hardware and software for developing graphics packages using OpenGL.

Question Paper Pattern:

- The question paper will have ten questions.
- Each full Question consisting of 20 marks
- There will be 2 full questions (with a maximum of four sub questions) from each module.
- Each full question will have sub questions covering all the topics under a module.
- The students will have to answer 5 full questions, selecting one full question from each module.

Textbooks:

1. Donald Hearn & Pauline Baker: Computer Graphics with OpenGL Version,3rd / 4th Edition, Pearson Education,2011
2. Edward Angel: Interactive Computer Graphics- A Top Down approach with OpenGL, 5th edition, Pearson Education, 2008

Reference Books:

1. James D Foley, Andries Van Dam, Steven K Feiner, John F Huges Computer graphics with OpenGL: pearson education
2. Xiang, Plastock : Computer Graphics , sham's outline series, 2nd edition, TMG.
3. Kelvin Sung, Peter Shirley, steven Baer : Interactive Computer Graphics, concepts and applications, Cengage Learning
4. M M Raikar & Shreedhara K S Computer Graphics using OpenGL, Cengage publication

COMUTER GRAPHICS AND VISUALIZATION
(Effective from the academic year 2018 -2019)
SEMESTER – VI

Course Code	**18CS62**	**CIE Marks**	40
Number of Contact Hours/Week	3:2:0	**SEE Marks**	60
Total Number of Contact Hours	50	**Exam Hours**	03

CREDITS –4

Course Learning Objectives: This course (18CS62) will enable students to:

- Explain hardware, software and OpenGL Graphics Primitives.
- Illustrate interactive computer graphic using the OpenGL.
- Design and implementation of algorithms for 2D graphics Primitives and attributes.
- Demonstrate Geometric transformations, viewing on both 2D and 3D objects.
- Infer the representation of curves, surfaces, Color and Illumination models

Module 1	**Contact Hours**
Overview: Computer Graphics and OpenGL: Computer Graphics: Basics of computer graphics, Application of Computer Graphics, Video Display Devices: Random Scan and Raster Scan displays, graphics software. OpenGL: Introduction to OpenGL ,coordinate reference frames, specifying two-dimensional world coordinate reference frames in OpenGL, OpenGL point functions, OpenGL line functions, point attributes, line attributes, curve attributes, OpenGL point attribute functions, OpenGL line attribute functions, Line drawing algorithms(DDA, Bresenham's), circle generation algorithms (Bresenham's). **Text-1:Chapter -1: 1-1 to 1-9, 2-1(page 39 to 41),2.8,2.9,3-1 to 3-5,3-9,3-20** **RBT: L1, L2, L3**	10
Module 2	
Fill area Primitives, 2D Geometric Transformations and 2D viewing: Fill area Primitives: Polygon fill-areas, OpenGL polygon fill area functions, fill area attributes, general scan line polygon fill algorithm, OpenGL fill-area attribute functions. 2DGeometric Transformations: Basic 2D Geometric Transformations, matrix representations and homogeneous coordinates, Inverse transformations, 2DComposite transformations, other 2D transformations, raster methods for geometric transformations, OpenGL raster transformations, OpenGL geometric transformations function, 2D viewing: 2D viewing pipeline, OpenGL 2D viewing functions. **Text-1:Chapter 3-14 to 3-16,4-9,4-10,4-14,5-1 to 5-7,5-17,6-1,6-4** **RBT: L1, L2, L3**	10
Module 3	
Clipping,3D Geometric Transformations, Color and Illumination Models: Clipping: clipping window, normalization and viewport transformations, clipping algorithms,2D point clipping, 2D line clipping algorithms: cohen-sutherland line clipping only -polygon fill area clipping: Sutherland-Hodgeman polygon clipping algorithm only.3DGeometric Transformations: 3D translation, rotation, scaling, composite 3D transformations, other 3D transformations, affine transformations, OpenGL geometric transformations functions. Color Models: Properties of light, color models, RGB and CMY color models. Illumination Models: Light sources, basic illumination models-Ambient light, diffuse reflection, specular and phong model, Corresponding openGL functions. **Text-1:Chapter :6-2 to 6-08 (Excluding 6-4),5-9 to 5-17(Excluding 5-15),12-1,12-2,12-4,12-6,10-1,10-3** **RBT: L1, L2, L3**	10
Module 4	
3D Viewing and Visible Surface Detection: 3DViewing:3D viewing concepts, 3D viewing	10

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	22/06/22	WED	Introduction to System Software	✓	
42	24/06/22	FRI	Machine Architecture of SIC	✓	
43	24/06/22	FRI	SIC/XE	✓	
44	25/06/22	SAT	Assemblers: Basic assembler functions	✓	
45	28/06/22	TUE	machine dependent assembler features	✓	
46	28/06/22	TUE	machine independent assembler features	✓	
47	29/06/22	WED	assembler design options	✓	
48	29/06/22	WED	Basic Loader Functions	✓	
49	02/07/22	SAT	Revision	✓	
50	02/07/22	SAT	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 22.06.2022	TO: 02.07.2022	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: 01	SEMINARS:	ANY OTHER:

Mrs Kavyashree K
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

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TUMKUR - 572105

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	01/06/22	WED	Syntax Directed Translation	✓	
32	03/06/22	FRI	Syntax Directed Translation-Attributes	✓	
33	04/06/22	SAT	Syntax Directed Translation-Examples	✓	
34	07/06/22	TUE	Intermediate code generation-RULES	✓	
35	08/06/22	WED	Intermediate code generation-QUADRUPLE ,TRIPLE	✓	
36	08/06/22	WED	Intermediate code generation-Examples Generation of 3 address code	✓	
37	14/06/22	TUE	Code generation	✓	
38	15/06/22	WED	Code generation-issues	✓	
39	21/06/22	TUE	Code generation	✓	
40	22/06/22	WED	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 01.06.2022	TO: 22.06.2022	
ACTUAL CLASSES TAKEN	FROM: 1 06 22	TO: 22 06 22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION ✓
	QUIZ: 01	SEMINARS:	ANY OTHER:

Mrs Kavyashree K
Staff Incharge

Prof Shanmukha Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	18/05/22	WED	Syntax Analysis: Introduction	✓	
22	24/05/22	TUE	Context Free Grammars	✓	
23	24/05/22	TUE	Writing a grammar.	✓	
24	25/05/22	WED	Top Down Parsers	✓	
25	25/05/22	WED	Top Down Parsers	✓	
26	27/05/22	FRI	Top Down Parsers.	✓	
27	27/05/22	FRI	Top Down Parsers	✓	
28	28/05/22	SAT	Bottom Up Parsers	✓	
29	28/05/22	SAT	Bottom Up Parsers	✓	
30	31/05/22	TUE	Bottom Up Parsers	✓	

SUMMARY

PLANNED DATE	FROM: 18.05.2022	TO:31.05.2022	
ACTUAL CLASSES TAKEN	FROM: 18.05.2022	TO: 31.05.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K & Mrs Rashmi
Staff Incharge

Prof Shanmuka Swamy C V
HOD,CSE

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MODULE II/IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	Lex-yacc communication-Programs	✓	
12	03/05/22	TUE	Lex-yacc communication-Programs continued	✓	
13	04/05/22	WED	Lex-yacc communication-Programs continued	✓	
14	06/05/22	FRI	Lex-yacc communication-Programs	✓	
15	07/05/22	SAT	Input buffering	✓	
16	10/05/22	TUE	Transition Diagrams and regular expressions	✓	
17	11/05/22	WED	Transition Diagrams-Examples	✓	
18	13/05/22	FRI	Transition Diagrams-Examples	✓	
19	14/05/22	SAT	Revision	✓	
20	17/05/22	TUE	Revision	✓	

SUMMARY

PLANNED DATE	FROM: 30.04.2022	TO: 17.05.2022	
ACTUAL CLASSES TAKEN	FROM: 30.04.2022	TO: 17.05.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓ Sol	IA 2: ✓ Sol	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: C1	TUTORIALS: C2	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmukha Swamy C V
HOD,CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022) MICROSCHEDULE

SUBJECT	System Software and Compiler Design	STAFF NAME	Dr. SUHAS G K Mrs Kavyashree K
SUBJECT CODE	18CS61	SEM/SEC	VI
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE II/IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	12/04/22	TUE	Introduction: Language Processors	✓	
2	13/04/22	WED	The structure of a compiler	✓	
3	16/04/22	SAT	The structure of a compiler-Continued	✓	
4	19/04/22	TUE	The structure of a compiler	✓	
5	20/04/22	WED	The role of lexical analyzer	✓	
6	22/04/22	FRI	The role of lexical analyzer-Continued	✓	
7	23/04/22	SAT	The role of lexical analyzer-continued	✓	
8	26/04/22	TUE	recognition of token by Parser/Syntax Analyzer	✓	
9	27/04/22	WED	recognition of token by Parser/Syntax Analyzer	✓	
10	29/04/22	FRI	Lex-yacc communication	✓	

SUMMARY

PLANNED DATE	12.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 12.04.2022	TO: 29.04.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Suhas G K
Staff Incharge

Prof Shanmukha Swamy G V
HOD,CSE

HOD
Dept. of CSE
SIET, Tumkur

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -JAN 2022) MACRO SCHEDULE

SUBJECT	**WEB PROGRAMMING AND ITS APPLICATIONS**	**STAFF NAME**	**BASAVESHA D**
SUBJECT CODE	**18CS63**	**SEM/SEC**	**VI**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- Illustrate the Semantic Structure of HTML and CSS. Compose forms and tables using HTML and CSS.
- Design Client-Side programs using JavaScript and Server-Side programs using PHP.
- Infer Object Oriented Programming capabilities of PHP.
- Examine JavaScript frameworks such as jQuery and Backbone.
- Design the User interface, design, menu creation ,windows creation and connection between menus and windows.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	04.04.2022 to 26.04.2022	**Module –1** Introduction to HTML, What is HTML and Where did it come from?, HTML Syntax, Semantic Markup, Structure of HTML Documents, Quick Tour of HTML Elements, HTML5 Semantic Structure Elements, Introduction to CSS, What is CSS, CSS Syntax, Location of Styles, Selectors, The Cascade: How Styles Interact, The Box Model, CSS Text Styling. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=Mu6Jm3Ydwfo https://www.youtube.com/watch?v=5eNvuuL7ufk
2	27.04.2022 To 14.05.2022	**Module –2** HTML Tables and Forms, Introducing Tables, Styling Tables, Introducing Forms, Form Control Elements, Table and Form Accessibility, Microformats, Advanced CSS: Layout, Normal Flow, Positioning Elements, Floating Elements, Constructing Multicolumn Layouts, Approaches to CSS Layout, Responsive Design, CSS Frameworks. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=8SWAMmfaA8 https://www.youtube.com/watch?v=6Jpp0bf9Q
3	16.05.2022	**Module –3** JavaScript: Client-Side Scripting, What is JavaScript and What can it do?, JavaScript Design Principles, Where	https://www.youtube.com/watch?v=PBnmKGRSwAM&t=42s youtube%3Acourse%3DLSWMSJvLvLRGGcL

	to 02.06.2022	does JavaScript Go?, Syntax, JavaScript Objects, The Document Object Model (DOM), JavaScript Events, Forms, Introduction to Server-Side Development with PHP, What is Server-Side Development, A Web Server"s Responsibilities, Quick Tour of PHP, Program Control, Functions. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=MuVzR1tHMk
4	04.06.2022 To 23.06.2022	**Module–4** PHP Arrays and Superglobals, Arrays, $_GET and $_POST Superglobal Arrays, $_SERVER Array, $_Files Array, Reading/Writing Files, PHP Classes and Objects, Object-Oriented Overview, Classes and Objects in PHP, Object Oriented Design, Error Handling and Validation, What are Errors and Exceptions?, PHP Error Reporting, PHP Error and Exception Handling **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=BUG0tvIkGLI&t=1s https://www.youtube.com/watch?v=6EnbDID_fis
5	25.06.2022 to 11.07.2022	**Module–5** Managing State, The Problem of State in Web Applications, Passing Information via Query Strings, Passing Information via the URL Path, Cookies, Serialization, Session State, HTML5 Web Storage, Caching, Advanced JavaScript and jQuery, JavaScript PseudoClasses, jQuery Foundations, AJAX, Asynchronous File Transmission, Animation, BackboneMVC Frameworks, XML Processing and Web Services, XML Processing, JSON, Overview of Web Services. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=9Qhm13XHQ3s https://www.youtube.com/watch?v=wcvXBUQ0vbA&list=PLzmfdCD8S2lmqmIzM3Rla3Bq0KsbG6hUCn

Textbooks:

Randy Connolly, Ricardo Hoar, "Fundamentals of Web Development", 1 st Edition, Pearson Education India. (ISBN:978-9332575271).

Reference Books:

1. Robin Nixon, "Learning PHP, MySQL &JavaScript with jQuery, CSS and HTML5", 4 thEdition, O"Reilly Publications, 2015. (ISBN:978-9352130153)
2. Luke Welling, Laura Thomson, "PHP and MySQL Web Development", 5 th Edition, Pearson Education, 2016. (ISBN:978-9332582736)
3. Nicholas C Zakas, "Professional JavaScript for Web Developers", 3 rd Edition, Wrox/Wiley India, 2012. (ISBN:978-8126535088)
4. David Sawyer Mcfarland, "JavaScript & jQuery: The Missing Manual", 1 st Edition, O'Reilly/Shroff Publishers & Distributors Pvt Ltd, 2014

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TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR 2022- AUG 2022) MICRO SCHEDULE

SUBJECT	**WEB TECHNOLOGY AND ITS APPLICATIONS**	**STAFF NAME**	**Mr. Basavesha D**
SUBJECT CODE	**18CS63**	**SEM/SEC**	**VI 'B'**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

MODULE 1					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
1	4/4/22	TUE	**Module-1:** Introduction to HTML, What is HTML and Where did it come from?,	Covered	
2	5/4/22	WED	HTML Syntax, Semantic Markup, Structure of HTML Documents	Covered	
3	11/4/22	THU	Quick Tour of HTML Elements	Covered	
4	12/4/22	FRI	HTML5 Semantic Structure Elements	Covered	
5	13/4/22	TUE	Introduction to CSS,	Covered	
6	18/4/22	WED	What is CSS, CSS Syntax	Covered	
7	19/4/22	THU	Location of Styles,	Covered	
8	20/4/22	FRI	Selectors	Covered	
9	22/4/22	TUE	The Cascade: How Styles Interact	Covered	
10	25/4/22	WED	The Box Model	Covered	
11	25/4/22	THU	CSS Text Styling	Covered	

12	26/4/22	FRI	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**04.04.2022**	**TO: 26.04.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 4/4/22	**TO:** 26/4/22	
NUMBER OF CLASSES	**ALLOCATED: 12**	**TAKEN:** 12	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Basaveshi D
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
DAYANANDA SAGAR INSTITUTE OF
ENGINEERING & TECHNOLOGY
KUMARASWAMY LAYOUT
BANGALORE - 560 078

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	27/4/22	TUE	**Module – 2:** HTML Tables	Covered	
14	28/4/22	WED	Forms, Introducing Tables	Covered	
15	30/4/22	THU	Styling Tables	Covered	
16	2/5/22	TUE	Introducing Forms, Form Control Elements, Table and Form Accessibility	Covered	
17	4/5/22	WED	Microformats	Covered	
18	5/5/22	THU	Advanced CSS: Layout, Normal Flow	Covered	
19	7/5/22	FRI	Positioning Elements, Floating Elements	Covered	
20	9/5/22	TUE	Constructing Multicolumn Layouts	Covered	
22	10/5/22	WED	Approaches to CSS Layout	Covered	
22	11/5/22	TUE	Responsive Design	Covered	
23	12/5/22	WED	CSS Frameworks	Covered	
24	14/5/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 27.04.2022	TO: 14.05.2022	
ACTUAL CLASSES TAKEN	FROM: 27/4/22	TO: 14/5/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Bhavesha D
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
BHARATH INSTITUTE OF ENGINEERING & TECHNOLOGY
Tum... 2706.

MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	16/5/22	FRI	**Module – 3:** JavaScript: Client-Side Scripting	Covered	
25	17/5/22	TUE	What is JavaScript and What can it do?,	Covered	
26	18/5/22	WED	JavaScript Design Principles. Where does JavaScript Go?,	Covered	
27	19/5/22	THU	Syntax, JavaScript Objects	Covered	
28	24/5/22	FRI	The Document Object Model (DOM). JavaScript Events Forms	Covered	
29	25/5/22	TUE	Introduction to Server-Side Development with PHP	Covered	
30	26/5/22	WED	What is Server-Side Development	Covered	
31	28/5/22	THU	A Web Server's Responsibilities	Covered	
32	30/5/22	FRI	Quick Tour of PHP	Covered	
33	31/5/22	TUE	Program Control	Covered	
34	1/6/22	WED	Functions	Covered	
35	2/6/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 16.05.2022	TO:02.06.2022	
ACTUAL CLASSES TAKEN	FROM: 16/5/22.	TO: 2/6/22.	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavesha D
Staff Incharge

Dr. Sulas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
BHEEMANNA INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR. 572106.

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
36	4/6/22	FRI	**Module – 4:** PHP Arrays and Superglobals	Covered	
37	6/6/22	THU	Arrays, $_GET and $_POST Superglobal Arrays	Covered	
38	7/6/22	FRI	$_SERVER Array, $_Files Array	Covered	
39	8/6/22	TUE	Reading/Writing Files, PHP Classes and Objects	Covered	
40	9/6/22	WED	Object-Oriented Overview	Covered	
41	13/6/22	THU	Classes and Objects in PHP	Covered	
42	14/6/22	FRI	Object Oriented Design.	Covered	
43	15/6/22	TUE	Error Handling and Validation	Covered	
44	16/6/22	WED	What are Errors and Exceptions?.	Covered	
45	22/6/22	THU	PHP Error Reporting	Covered	
46	22/6/22	FRI	PHP Error and Exception Handling	Covered	
47	23/6/22	TUE	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 04.06.2022	TO: 23.06.2022	
ACTUAL CLASSES TAKEN	FROM: 4/6/22	TO: 23/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Bhavedha D
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR

MODULE V

SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	25/6/22	THU	**Module – 5** Managing State. The Problem of State in Web Applications	Covered	
49	27/6/22	FRI	Passing Information via Query String	Covered	
50	28/6/22	FRI	Passing Information via the URL Path, Cookies, Serialization	Covered	EXTRA
51	29/6/22	TUE	Session State. HTML5 Web Storage	Covered	
52	30/6/22	TUE	Caching. Advanced JavaScript and jQuery	Covered	EXTRA
53	1/7/22	WED	JavaScript Pseudo-Classes. jQuery Foundations	Covered	
54	2/7/22	WED	AJAX. Asynchronous File Transmission	Covered	EXTRA
55	4/7/22	TUE	Animation.	Covered	
56	5/7/22	TUE	Backbone MVC Frameworks	Covered	EXTRA
57	6/7/22	WED	XML Processing and Web Services	Covered	
58	7/7/22	WED	XML Processing. JSON.	Covered	EXTRA
59	9/7/22	THU	Overview of Web Services.	Covered	
60	11/7/22	FRI	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 25.06.22	TO: 11.07.2022	
ACTUAL CLASSES TAKEN	FROM: 25/6/22	TO: 11/7/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Basavaraja D
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIN[illegible]E OF
ENGINEERING & TECHNOLOGY
[illegible]

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2022) MICRO SCHEDULE

SUBJECT	OBJECT-ORIENTED MODELING AND DESIGN	STAFF NAME	Mr. Renukaradhya P C
SUBJECT CODE	18CS642	SEM/SEC	VI "A"
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
			PART-A		
1	04/04/22	MON	**Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development?	Covered	
2	05/04/22	TUE	OO Themes; Evidence for usefulness of OO development;	Covered	
3	11/04/22	THU	OO modelling history. Modelling as Design technique: Modelling; abstraction;	Covered	
4	12/04/22	SAT	The Three models. Class Modelling: Object and Class Concept;	Covered	
5	16/04/22	MON	Link and associations concepts; Generalization and Inheritance;	Covered	
6	18/04/22	TUE	A sample class model; Navigation of class models; Advanced Class Modelling,	Covered	
7	19/04/22	THU	Advanced object and class concepts; Association ends;	Covered	
8	21/04/22	SAT	N-ary associations; Aggregation; Abstract classes;	Covered	
9	23/04/22	MON	Multiple inheritance;	Covered	

10	25/04/22	TUE	Metadata: Reification;	Covered	
11	26/04/22	THU	Constraints; Derived Data; Packages	Covered	

SUMMARY

PLANNED DATE	FROM: 04.04.2022	TO: 26.04.2022	
ACTUAL CLASSES TAKEN	FROM: 4/4/22	TO: 26/4/22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Renukadevi P C
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SRINIVAS INSTITUTE OF ENGINEERING & TECHNOLOGY
Yuvaraj Nagar, Mukka, Mangaluru-574 146

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	28/04/22	MON	**Module – 2:** UseCase Modelling and Detailed Requirements	Covered	
13	30/04/22	TUE	Overview; Detailed objectoriented Requirements definitions	Covered	
14	02/05/22	THU	System Processes-A use case/Scenario view	Covered	
15	5/05/22	SAT	Identifying Input and outputs-The System sequence diagram	Covered	
16	7/05/22	MON	Identifying Input and outputs-The System sequence diagram cont...	Covered	
17	09/05/22	TUE	Identifying Object Behaviour-	Covered	

18	10/05/22	THU	Identifying Object Behaviour cont....	Covered	
19	12/05/22	SAT	The System sequence diagram	Covered	
20	14/05/22	MON	The System sequence diagram cont.	Covered	
21	16/05/22	TUE	The state chart Diagram.	Covered	
22	17/06/22	THU	Integrated Object-oriented Models.	Covered	

SUMMARY

PLANNED DATE	FROM: 28.04.2022	TO: 17.05.2022	
ACTUAL CLASSES TAKEN	FROM: 28/4/22	TO: 19/5/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓ (10)	IA 2: ✓ (10)	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Renukaradhya P C
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	19/05/22	MON	Module – 3: Process Overview	Covered	
24	24/05/22	TUE	System Conception and Domain Analysis	Covered	
25	26/05/22	THU	Process Overview: Development stages:	Covered	
26	28/05/22	SAT	Development life Cycle	Covered	
27	30/05/22	MON	System Conception: Devising a system concept.	Covered	
28	31/05/22	TUE	Elaborating a concept, preparing a problem statement .	Covered	
29	02/06/22	THU	Domain Analysis.	Covered	
30	04/06/22	SAT	Overview of analysis.	Covered	
31	06/06/22	MON	Domain interaction model Iterating the analysis.	Covered	
32	07/06/22	TUE	Domain Class model.	Covered	
33	09/06/22	THU	Domain state model.	Covered	

SUMMARY

PLANNED DATE	FROM: 19.05.2022	TO:09.06.2022	
ACTUAL CLASSES TAKEN	FROM: 19/5/22	TO: 9/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Renukaradhya P C
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	13/06/22	MON	Module – 4: Use case Realization :The Design Discipline within up iterations.	Covered	
35	14/06/22	TUE	Object Oriented Design-The Bridge between Requirements and Implementation	Covered	
36	16/06/22	THU	Object Oriented Design-The Bridge between Requirements and Implementation cont....	Covered	

37	21/06/22	SAT	Design Classes and Design within Class Diagrams;	Covered	
38	23/06/22	MON	Interaction Diagrams-Realizing Use Case and defining methods;	Covered	
39	25/06/22	TUE	Designing with Communication Diagrams	Covered	
40	27/06/22	THU	Updating the Design Class Diagram;	Covered	
41	28/06/22	MON	Package Diagrams-Structuring the Major Components;	Covered	
42	30/06/22	TUE	Implementation Issues for Three-Layer Design;	Covered	
43	2/07/22	THU	The Design Discipline within up iterations.	Covered	
44	02/07/22	SAT	The Bridge between Requirements and Implementation	Covered	

SUMMARY

PLANNED DATE	**FROM: 13.06.2022**	**TO: 02.07.2022**	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Renukaradya P C
Staff Incharge

Prof. C.V. Shanmukhaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SIDDEVA INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	02/07/22	MON	Module – 5: Design Patterns:	Covered	
46	04/07/22	TUE	Introduction: what is a design pattern?	Covered	
47	05/07/22	THU	Describing design patterns.	Covered	
48	07/07/22	SAT	the catalogue of design patterns.	Covered	
49	09/07/22	MON	Organizing the catalogue.	Covered	
5	09/07/22	TUE	How design patterns solve design problems.	Covered	
51	11/07/22	THU	how to select a design patterns.	Covered	
52	12/07/22	SAT	how to use a design pattern.	Covered	
53	12/07/22	MON	Creational patterns: prototype and singleton (only).	Covered	

SUMMARY

PLANNED DATE	FROM: 02.07.2022	TO: 12.07.2022	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Renukaddya P C
Staff Incharge

Prof. C. V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2022) MACROSCHEDULE

SUBJECT	**OBJECT-ORIENTED MODELING AND DESIGN**	**STAFF NAME**	**Mr.Renukaradhya P C**
SUBJECT CODE	**18CS642**	**SEM/SEC**	**VI 'A'**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

CO1: Describe the concepts of object-oriented and basic class modelling.

CO2: Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.

CO3: Choose and apply a befitting design pattern for the given problem.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
	04.4.2022 to 26.02.2022	**PART-A** **Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. Class Modelling: Object and Class Concept; Link and associations concepts; Generalization and Inheritance; A sample class model; Navigation of class models; Advanced Class Modelling. Advanced object and class concepts; Association ends; N-ary associations; Aggregation; Abstract classes; Multiple inheritance; Metadata; Reification; Constraints; Derived Data; Packages. Question papers solvation	https://www.youtube.com/watch?v=9IAPZzG56ME&list=PLDN4rrl48XKaZ6B0YI1t-Q2BsqiTvs_0 https://www.youtube.com/watch?v=GQY1Dv5eKhE&list=PLzjk1qQzpn8wGd1vNbpIsm2ghse8CXCml https://www.youtube.com/watch?v=mEIn07gEE&list=PLJeKuQsJAid-0Gs29UBbmWDWHbENCWW

2	28.04.2022 to 17.052022	**Module -2: UseCase Modelling and Detailed Requirements** Overview; Detailed objectoriented Requirements definitions System Processes-A use case/Scenario view Identifying Input and outputs-The System sequence diagram Identifying Input and outputs-The System sequence diagram cont.... Identifying Object Behaviour- Identifying Object Behaviour cont.... The state chart Diagram Integrated Object-oriented Models Question papers solvation	https://www.youtube.com/watch?v=28r2bW9tvPg https://www.youtube.com/watch?v=YAEtFsVGnrA https://www.youtube.com/watch?v=P5Emf0f7b4m
3	19.05.2022 to 09.06.2022	**Module -3: Process Overview** System Conception and Domain Analysis Process Overview: Development stages: Development life Cycle System Conception: Devising a system concept: Elaborating a concept; preparing a problem statement Domain Analysis: Overview of analysis Domain Class model: Domain state model Domain interaction model Iterating the analysis Question papers solvation	https://www.youtube.com/watch?v=AfvQuaL_-NY https://www.youtube.com/watch?v=IMOpX3q9SJI https://www.youtube.com/watch?v=1AdSUtvSsk0&list=PLfkTqIf3mn8wS0h2v5hudmn2gkvu8CXC

4	13.06.2022 to 02.07.2022	**Module -4: Use case Realization :The Design Discipline within up iterations:** Object Oriented Design-The Bridge between Requirements and Implementation Object Oriented Design-The Bridge between Requirements and Implementation cont.... Design Classes and Design within Class Diagrams: Interaction Diagrams-Realizing Use Case and defining methods: Designing with Communication Diagrams Updating the Design Class Diagram: Package Diagrams-Structuring the Major Components: Implementation Issues for Three-Layer Design. Question papers solvation	https://www.youtube.com/watch?v=5dRGRuckUJM https://www.youtube.com/watch?v=5dRGRuckUJM&list=PLJULIhvhzIrUR2NKhng7acXYIcAlb1dXb https://www.youtube.com/watch?v=lVR2tP9ialI&list=PLdv2W4Shv31aBcIE1WS4MR9LRfbmZrAOa https://www.youtube.com/watch?v=oNlh2P9qE https://www.youtube.com/watch?v=Gc4mWzmJBm

			https://www.youtube.com/watch?v=0bAbnH8N6s
		Module -5: Design Patterns	https://www.youtube.com/watch?v=Mv_HuHH3A
	04.07.2022	Introduction; what is a design pattern?	
	to	Describing design patterns.	https://www.youtube.com/watch?v=Lm17fp0CuYM&list=PL8wmnXn7pVmv4J9UWsbo5jA7Ofm6a-9Bsby
	12.07.2022	the catalogue of design patterns.	
		Organizing the catalogue.	
		How design patterns solve design problems.	
		how to select a design patterns.	https://www.youtube.com/watch?v=3HBNPdU_Q6g
		how to use a design pattern.	
		Creational patterns: prototype and singleton (only).	https://www.youtube.com/watch?v=1EP_eNbu7k
		Creational patterns: prototype and singleton (only) (cont...	
		Structural patterns adapter and proxy (only)	https://www.youtube.com/watch?v=2bJfSQqIMIU
		Question papers solvation	
		Question papers solvation	https://www.youtube.com/watch?v=nLmhmIh6NrcM

Renukaradhya P C
Staff Incharge

Prof. C V Sharmukaraddy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2022) MACROSCHEDULE

SUBJECT	**OBJECT-ORIENTED MODELING AND DESIGN**	**STAFF NAME**	**Mr.Renukaradhya P C**
SUBJECT CODE	**18CS642**	**SEM/SEC**	**VI "B"**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

CO1: Describe the concepts of object-oriented and basic class modelling.

CO2: Draw class diagrams, sequence diagrams and interaction diagrams to solve problems.

CO3: Choose and apply a befitting design pattern for the given problem.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	**05.04.2022 to 29.04.2022**	**PART-A** **Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development OO modelling history. Modelling as Design technique: Modelling; abstraction; The Three models. Class Modelling: Object and Class Concept; Link and associations concepts; Generalization and Inheritance; A sample class model; Navigation of class models; Advanced Class Modelling. Advanced object and class concepts; Association ends; N-ary associations; Aggregation; Abstract classes; Multiple inheritance; Metadata; Reification; Constraints; Derived Data; Packages. Question papers solvation	https://www.youtube.com/watch?v=8IAPZqG5bME&list=PLfDNfee148X8qZk9BJ1JD-Q2BwqTrs_O https://www.youtube.com/watch?v=5rQ5T9y5cMA&list=PLrjk1qeJmu8wGQvNhqHmm2gh6x9ICNCmf https://www.youtube.com/watch?v=tvElxiQ7qEU&list=PL-dvhiqDxUAtb-lGxJ9Bl8tanWGW3BbGM7MW

2.	30.04.2022 to 17.052022	**Module -2: UseCase Modelling and Detailed Requirements** Overview: Detailed objectoriented Requirements definitions System Processes-A use case/Scenario view Identifying Input and outputs-The System sequence diagram Identifying Input and outputs-The System sequence diagram cont... Identifying Object Behaviour- Identifying Object Behaviour cont... The state chart Diagram Integrated Object-oriented Models Question papers solvation	https://www.youtube.com/watch?v=20r218Sxc8g https://www.youtube.com/watch?v=3AEIEsYGnbA https://www.youtube.com/watch?v=PIEmEr7S4bw
3.	17.05.2022 to 4.06.2022	**Module -3: Process Overview** System Conception and Domain Analysis Process Overview: Development stages: Development life Cycle: System Conception: Devising a system concept: Elaborating a concept; preparing a problem statement Domain Analysis: Overview of analysis Domain Class model: Domain state model Domain interaction model Iterating the analysis Question papers solvation	https://www.youtube.com/watch?v=AWvQxaL_5Cs https://www.youtube.com/watch?v=jMOnNJqPkII https://www.youtube.com/watch?v=GQ5T0vYzkhE&list=PLrjkTqI2jomBvGQ2vSbgdmm2gb-n8lCXC&ind

4.	04.06.2022 to 18.06.2022	**Module -4: Use case Realization :The Design Discipline within up iterations:** Object Oriented Design-The Bridge between Requirements and Implementation Object Oriented Design-The Bridge between Requirements and Implementation cont..... Design Classes and Design within Class Diagrams; Interaction Diagrams-Realizing Use Case and defining methods; Designing with Communication Diagrams Updating the Design Class Diagram; Package Diagrams-Structuring the Major Components; Implementation Issues for Three-Layer Design. Question papers solvation	https://www.youtube.com/watch?v=5dRGRucKU3M https://www.youtube.com/watch?v=5dRGRucKU3M&list=PLJU1Hs8z69EJOSKbnq7acXYIc4MvJdXb https://www.youtube.com/watch?v=IVJ2a9bcI8&list=PLdo5W4Nhv31gBcPF1WS4M895JUbm/2MQs https://www.youtube.com/watch?v=eNIInf2P9gI https://www.youtube.com/watch?v=Gu4mWrmdHvs

			https://www.youtube.com/watch?v=U6OmD8Vtw
		Module -5: Design Patterns	https://www.youtube.com/watch?v=nEv_FIJ4J8A
	29.06.2022	Introduction, what is a design pattern?	
	to	Describing design patterns.	https://www.youtube.com/watch?v=1mY7SIOCaYM&list=PLBxzxnzN7qVxxvxQRtWuhxSAZ9JBf65eS&index=6
	13.07.2022	the catalogue of design patterns.	
		Organizing the catalogue.	
		How design patterns solve design problems.	
8.		how to select a design patterns.	https://www.youtube.com/watch?v=AkBN8v0_5Pw
		how to use a design pattern.	
		Creational patterns: prototype and singleton (only).	https://www.youtube.com/watch?v=3EP_sNb62k
		Creational patterns: prototype and singleton (only)(cont...	
		Structural patterns adapter and proxy (only)	https://www.youtube.com/watch?v=1TkB89qIMB1
		Question papers solvation	
		Question papers solvation	https://www.youtube.com/watch?v=vkmbmB6Nzv8

Renukaradhya P C
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APR- AUG 2022) MICRO SCHEDULE

SUBJECT	OBJECT-ORIENTED MODELING AND DESIGN	STAFF NAME	Mr. Renukaradhya P C
SUBJECT CODE	18CS642	SEM/SEC	VI "B"
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
			PART-A		
1	05/04/22	TUE	**Module – 1: Introduction, Modelling Concepts and Class Modelling:** What is Object orientation? What is OO development?	Covered	
2	12/04/22	WED	OO Themes; Evidence for usefulness of OO development;	Covered	
3	13/04/22	FRI	OO modelling history. Modelling as Design technique: Modelling; abstraction;	Covered	
4	16/04/22	SAT	The Three models. Class Modelling: Object and Class Concept;	Covered	
5	19/04/22	TUE	Link and associations concepts; Generalization and Inheritance;	Covered	
6	20/04/22	WED	A sample class model; Navigation of class models; Advanced Class Modelling.	Covered	
7	22/04/22	FRI	Advanced object and class concepts; Association ends;	Covered	
8	23/04/22	SAT	N-ary associations; Aggregation; Abstract classes;	Covered	
9	26/04/22	TUE	Multiple inheritance;	Covered	

10	27/04/22	WED	Metadata; Reification;	Covered	
11	29/04/22	FRI	Constraints; Derived Data; Packages	Covered	

SUMMARY

PLANNED DATE	FROM: 05.04.2022	TO: 29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 5/4/22	TO: 29/4/22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Renukaradhya P C
Staff Incharge

Prof. C. V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SIDDHARTHA INSTITUTE OF
ENGINEERING & TECHNOLOGY
PUTTUR - 517 390.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	30/04/22	TUE	**Module – 2:** UseCase Modelling and Detailed Requirements	Covered	
13	04/05/22	WED	Overview; Detailed objectoriented Requirements definitions	Covered	
14	04/05/22	FRI	System Processes-A use case Scenario view	Covered	
15	06/05/22	SAT	Identifying Input and outputs-The System sequence diagram	Covered	
16	07/05/22	TUE	Identifying Input and outputs-The System sequence diagram cont...	Covered	
17	10/05/22	WED	Identifying Object Behaviour-	Covered	

18	10/05/22	FRI	Identifying Object Behaviour cont....	Covered	
19	11/05/22	SAT	The System sequence diagram	Covered	
20	13/05/22	TUE	The System sequence diagram cont.	Covered	
21	14/05/22	WED	The state chart Diagram.	Covered	
22	17/05/22	FRI	Integrated Object-oriented Models.	Covered	

SUMMARY

PLANNED DATE	FROM: 30.04.2022	TO: 17.05.2022	
ACTUAL CLASSES TAKEN	FROM: 30/4/22	TO: 17/5/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓ 50%	IA 2: ✓ 50%	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Renukaradhya P C
Staff Incharge

Prof. C V Sammikannavar
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	17/05/22	TUE	Module – 3: Process Overview	Covered	
24	18/05/22	WED	System Conception and Domain Analysis	Covered	
25	24/05/22	FRI	Process Overview: Development stages.	Covered	
26	25/05/22	SAT	Development life Cycle	Covered	
27	27/05/22	TUE	System Conception: Devising a system concept.	Covered	
28	28/05/22	WED	Elaborating a concept; preparing a problem statement	Covered	
29	31/05/22	FRI	Domain Analysis.	Covered	
30	01/06/22	SAT	Overview of analysis.	Covered	
31	01/06/22	TUE	Domain interaction model Iterating the analysis.	Covered	
32	03/06/22	WED	Domain Class model.	Covered	
33	04/06/22	FRI	Domain state model.	Covered	

SUMMARY

PLANNED DATE	FROM: 17.05.2022	TO:04.06.2022	
ACTUAL CLASSES TAKEN	FROM: 17/5/22	TO: 4/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Renukaradhya P C
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
INSTITUTE OF ENGG.

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	04/06/22	TUE	Module – 4: Use case Realization :The Design Discipline within up iterations:	Covered	
35	07/06/22	WED	Object Oriented Design-The Bridge between Requirements and Implementation	Covered	
36	08/06/22	FRI	Object Oriented Design-The Bridge between Requirements and Implementation cont.....	Covered	
37	14/06/22	SAT	Design Classes and Design within Class Diagrams:	Covered	
38	14/06/22	TUE	Interaction Diagrams-Realizing Use Case and defining methods:	Covered	

39	25/06/22	WED	Designing with Communication Diagrams	Covered	
40	21/06/22	FRI	Updating the Design Class Diagram;	Covered	
41	22/06/22	SAT	Package Diagrams-Structuring the Major Components;	Covered	
42	24/06/22	TUE	Implementation Issues for Three-Layer Design;	Covered	
43	25/06/22	WED	The Design Discipline within up iterations;	Covered	
44	28/06/22	FRI	The Bridge between Requirements and Implementation	Covered	

SUMMARY

PLANNED DATE	**FROM: 04.06.2022**	TO:28.06.2022	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	SEMINARS:	ANY OTHER:

Renukaradhya P C
Staff Incharge

Prof. C Nagaraja Swamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
BGSIT
ENGINEERING & TECHNOLOGY
MUR - 572106

MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
45	29/06/22	TUE	Module – 5: Design Patterns:	Covered	
46	01/07/22	WED	Introduction; what is a design pattern?	Covered	
47	02/07/22	FRI	Describing design patterns.	Covered	
48	05/07/22	SAT	the catalogue of design patterns.	Covered	
49	06/07/22	TUE	Organizing the catalogue.	Covered	
5	08/07/22	WED	How design patterns solve design problems.	Covered	
51	09/07/22	FRI	how to select a design patterns.	Covered	
52	12/07/22	SAT	how to use a design pattern.	Covered	
53	13/07/22	TUE	Creational patterns: prototype and singleton (only).	Covered	

SUMMARY

PLANNED DATE	**FROM: 29.06.2022**	TO: 13.07.2022	
ACTUAL CLASSES TAKEN	**FROM:**	TO:	
NUMBER OF CLASSES	**ALLOCATED: 10**	TAKEN:	
CONTENT COVERED FOR IA	**IA 1:**	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Renukadhya P C
Staff Incharge

Prof. C. V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SYSTEM SOFTWARE LABORATORY
(Effective from the academic year 2018 -2019)
SEMESTER – VI

Course Code	**18CSL66**	**CIE Marks**	40
Number of Contact Hours/Week	0:2:2	**SEE Marks**	60
Total Number of Lab Contact Hours	36	**Exam Hours**	03

Credits – 2

Course Learning Objectives: This course (18CSL66) will enable students to:

- To make students familiar with Lexical Analysis and Syntax Analysis phases of Compiler Design and implement programs on these phases using LEX & YACC tools and/or C/C++/Java
- To enable students to learn different types of CPU scheduling algorithms used in operating system.
- To make students able to implement memory management - page replacement and deadlock handling algorithms

Descriptions (if any):

Exercises to be prepared with minimum three files (Where ever necessary):

1. Header file.
2. Implementation file.
3. Application file where main function will be present.

The idea behind using three files is to differentiate between the developer and user sides. In the developer side, all the three files could be made visible. For the user side only header file and application files could be made visible, which means that the object code of the implementation file could be given to the user along with the interface given in the header file, hiding the source file, if required. Avoid I/O operations (printf/scanf) and use ***data input file*** where ever it is possible.

Programs List:

Installation procedure of the required software must be demonstrated, carried out in groups and documented in the journal.

1.	
a.	Write a LEX program to recognize valid ***arithmetic expression.*** Identifiers in the expression could be only integers and operators could be + and *. Count the identifiers & operators present and print them separately.
b.	Write YACC program to evaluate ***arithmetic expression*** involving operators: +, -, *, and /
2.	Develop, Implement and Execute a program using YACC tool to recognize all strings ending with ***b*** preceded by ***n*** ***a's*** using the grammar ***a^n b*** (note: input ***n*** value)
3.	Design, develop and implement YACC/C program to construct ***Predictive / LL(1) Parsing Table*** for the grammar rules: ***A →aBa , B →bB | ε***. Use this table to parse the sentence: ***abba$***
4.	Design, develop and implement YACC/C program to demonstrate ***Shift Reduce Parsing*** technique for the grammar rules: ***E →E+T | T, T →T*F | F, F →(E) | id*** and parse the sentence: ***id + id * id***.
5.	Design, develop and implement a C/Java program to generate the machine code using ***Triples*** for the statement ***A = -B * (C +D)*** whose intermediate code in three-address form: ***T1 = -B*** ***T2 = C + D*** ***T3 = T1 + T2*** ***A = T3***

6.	
a.	Write a LEX program to eliminate ***comment lines*** in a *C* program and copy the resulting program into a separate file.
b.	Write YACC program to recognize valid ***identifier, operators and keywords*** in the given text (*C program*) file.
7.	Design, develop and implement a C/C++/Java program to simulate the working of Shortest remaining time and Round Robin (RR) scheduling algorithms. Experiment with different quantum sizes for RR algorithm.
8.	Design, develop and implement a C/C++/Java program to implement Banker's algorithm. Assume suitable input required to demonstrate the results.
9.	Design, develop and implement a C/C++/Java program to implement page replacement algorithms LRU and FIFO. Assume suitable input required to demonstrate the results.

Laboratory Outcomes: The student should be able to:

- Implement and demonstrate Lexer's and Parser's
- Evaluate different algorithms required for management, scheduling, allocation and communication used in operating system.

Conduct of Practical Examination:

- Experiment distribution
  - i) For laboratories having only one part: Students are allowed to pick one experiment from the lot with equal opportunity.
  - ii) For laboratories having PART A and PART B: Students are allowed to pick one experiment from PART A and one experiment from PART B, with equal opportunity.
- Change of experiment is allowed only once and marks allotted for procedure to be made zero of the changed part only.
- Marks Distribution *(Courswal to change in accordance with university regulations)*
  - m) For laboratories having only one part – Procedure + Execution + Viva-Voce: 15+70+15 = 100 Marks
  - n) For laboratories having PART A and PART B
    - i. Part A – Procedure + Execution + Viva = 6 + 28 + 6 = 40 Marks
    - ii. Part B – Procedure + Execution + Viva = 9 + 42 + 9 = 60 Marks

- Analyze and Compare various linear and non-linear data structures
- Code, debug and demonstrate the working nature of different types of data structures and their applications
- Implement, analyze and evaluate the searching and sorting algorithms
- Choose the appropriate data structure for solving real world problems

Conduct of Practical Examination:

- Experiment distribution
  - For laboratories having only one part: Students are allowed to pick one experiment from the lot with equal opportunity.
  - For laboratories having PART A and PART B: Students are allowed to pick one experiment from PART A and one experiment from PART B, with equal opportunity.
- Change of experiment is allowed only once and marks allotted for procedure to be made zero of the changed part only.
- Marks Distribution *(Courtesy to change in accordance with university regulations)*
  c) For laboratories having only one part – Procedure + Execution + Viva-Voce: 15+70+15 = 100 Marks
  d) For laboratories having PART A and PART B
    i. Part A – Procedure + Execution + Viva = 6 + 28 + 6 = 40 Marks
    ii. Part B – Procedure + Execution + Viva = 9 + 42 + 9 = 60 Marks

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2019-20 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: System Software Lab
Class: VI Sem
Hours/Week: 03
Total Hours: 42

Course Code: 18CSL66
I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	Week 1	Revision or practice of sample programs	Covered
02	Week 2	1a.Write a LEX program to recognize valid arithmetic expression. Identifiers in the expression could be only integers and operators could be + and *. Count the identifiers & operators present and print them separately. 1b.Write YACC program to evaluate arithmetic expression involving operators: +, -, *, and / .	Covered
03	Week 3	2. Develop, Implement and Execute a program using YACC tool to recognize all strings ending with b preceded by n a's using the grammar a^n b (note: input n value)	Covered
04	Week 4	3. Design, develop and implement YACC/C program to construct predictive /LL(1) parsing Table for the grammar rules: A->aBa , B->bB|E . Use this table to parse the sentence: abba$	Covered
05	Week 5	4.Design, develop and implement YACC/C program to demonstrate Shift Reduce Parsing technique for the grammar rules:E->E+T|T,T->T*F|F,F-> (E)|id and parse the sentence id+id*id.	Covered
06	Week 6	5. Design, develop and implement a C/Java program to generate the machine code using triples for the statement A = -B*(C+D) whose intermediate code in three-address form T1=-B T2=C+D T3=T1+T2 A=T3	Covered
07	Week 7	**INTERNALS –I**	Conducted
08	Week 8	6a. Write a LEX program to eliminate comment lines in a C program and copy the resulting program into a separate file. 6b.Write YACC program to recognize valid identifier,operators and keywords in the given text (c program) file	Covered
09	Week 9	7.Design, develop and implement a C/C++/Java program to simulate the working of Shortest remaining time and Round Robin (RR) scheduling algorithms. Experiment with different quantum sizes for RR algorithm	Covered
10	Week 10	8.Design, develop and implement a C/C++/Java program to implement Banker's algorithm. Assume suitable input required to demonstrate the	Covered

		results .	
11	Week 11	9. Design, develop and implement a C/C++/Java program to implement page replacement algorithms LRU and FIFO. Assume suitable input required to demonstrate the results.	Covered
12	Week 12	**INTERNALS –II and Revision**	Conducted
13	Week 13	**Final Lab Internals**	Conducted
14	Week 14	**Revision of programs**	Covering.

Course Instructors
[Basavesha D]

PRINCIPAL
SJCT, TUMKUR

Head, Dept of CSE
[Prof.C.V Shanmukhaswamy]

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Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2021-22 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: SYSTEM SOFTWARE LABORATORY **Course Code: 18CSL66**

Class: VI Sem – A1 batch (Friday)
Hours/Week: 03
Total Hours: 42

I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	22-04-22	Revision or practice of sample programs	Covered
02	29-04-22	1a.Write a LEX program to recognize valid arithmetic expression. Identifiers in the expression could be only integers and operators could be + and *. Count the identifiers & operators present and print them separately 1b.Write YACC program to evaluate arithmetic expression involving operators: +, -, *, and /	Covered
03	06-05-22	2. Develop, Implement and Execute a program using YACC tool to recognize all strings ending with b preceded by n a's using the grammar a^n b (note: input n value)	Covered
04	06-05-22	3. Design, develop and implement YACC/C program to construct predictive /LL(1) parsing Table for the grammar rules: A->aBa , B->bB|E . Use this table to parse the sentence: abba$	Covered
05	13-05-22	4.Design, develop and implement YACC/C program to demonstrate Shift Reduce Parsing technique for the grammar rules:E->E+T|T,T->T*F|F,F->(E)|id and parse the sentence:id+id*id.	Covered
06	13-05-22	5. Design, develop and implement a C/Java program to generate the machine code using triples for the statement A = -B*(C+D) whose intermediate code in three-address form: T1=-B T2=C+D T3=T1+T2 A=T3	Covered
07	27-05-22	**INTERNALS –I and Revision**	Conducted
08	03-06-22	6a. Write a LEX program to eliminate comment lines in a C program and copy the resulting program into a separate file. 6b.Write YACC program to recognize valid identifier,operators and keywords in the given text (c program) file.	Covered
09	03-06-22	7.Design, develop and implement a C/C++/Java program to simulate the working of Shortest remaining time and Round Robin (RR) scheduling	Covered

		algorithms. Experiment with different quantum sizes for RR algorithm.	
10	24-06-22	8.Design, develop and implement a C/C++/Java program to implement Banker's algorithm. Assume suitable input required to demonstrate the results .	Covered
11	24-06-22	9. Design, develop and implement a C/C++/Java program to implement page replacement algorithms LRU and FIFO. Assume suitable input required to demonstrate the results.	Covered
12	1-07-22	**INTERNALS –II and Revision**	Conducted
13	8-07-22	**Final Lab Internals**	Conducted
14	8-07-22	**Revision of programs**	Covered

Course Instructors
[Basavesha D]

Head, Dept of CSE
[Prof.C.V.Shanmukaswamy]

PRINCIPAL
SIET, TUMAKURU

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2021-22 (Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: SYSTEM SOFTWARE LABORATORY **Course Code: 18CSL66**

Class: VI Sem – A2 batch (Monday)
Hours/Week: 03
Total Hours: 42

I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	04-04-22	Revision or practice of sample programs	Covered
02	11-04-22	1a.Write a LEX program to recognize valid arithmetic expression. Identifiers in the expression could be only integers and operators could be + and *. Count the identifiers & operators present and print them separately 1b.Write YACC program to evaluate arithmetic expression involving operators: +, -, *, and /	Covered
03	18-04-22	2. Develop, Implement and Execute a program using YACC tool to recognize all strings ending with b preceded by n a's using the grammar a^n b (note: input-n value)	Covered
04	25-04-22	3. Design, develop and implement YACC/C program to construct predictive /LL(1) parsing Table for the grammar rules: A->aBa , B->bBE , Use this table to parse the sentence: abba$	Covered
05	02-05-22	4.Design, develop and implement YACC/C program to demonstrate Shift Reduce Parsing technique for the grammar rules:E->E+T/T,T->T*F/F,F-> (E)/id and parse the sentence:id+id*id.	Covered
06	09-05-22	5. Design, develop and implement a C/Java program to generate the machine code using triples for the statement A = -B*(C+D) whose intermediate code in three-address form: T1=-B T2=C+D T3=T1+T2 A=T3	Conducted
07	16-05-22	**INTERNALS –I and Revision**	Conducted
08	30-05-22	6a. Write a LEX program to eliminate comment lines in a C program and copy the resulting program into a separate file. 6b.Write YACC program to recognize valid identifier,operators and keywords in the given text (c program) file.	Covered
09	06-06-22	7.Design, develop and implement a C/C++/Java program to simulate the working of Shortest remaining time and Round Robin (RR)	Covered

		scheduling algorithms. Experiment with different quantum sizes for RR algorithm.	
10	13-06-22	8.Design, develop and implement a C/C++/Java program to implement Banker's algorithm. Assume suitable input required to demonstrate the results .	Covered
11	27-06-22	9. Design, develop and implement a C/C++/Java program to implement page replacement algorithms LRU and FIFO. Assume suitable input required to demonstrate the results.	Covered
12	04-07-22	**INTERNALS –II and Revision**	Conducted
13	11-07-22	**Final Lab Internals**	Conducted
14	11-07-22	**Revision of Programs**	Covered

Course Instructors
[Basavesha D]

PRINCIPAL
SIET, TUMAKURU

Head, Dept of CSE
[Prof.C.V.Shanmukaswamy]

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Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2021-22(Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: SYSTEM SOFTWARE LABORATORY **Course Code: 18CSL66**

Class: VI Sem – A3 batch (Wednesday)
Hours/Week: 03
Total Hours: 42

I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	13-04-22	Revision or practice of sample programs	Covered
02	20-04-22	1a.Write a LEX program to recognize valid arithmetic expression.Identifiers in the expression could be only integers and operators could be + and *. Count the identifiers & operators present and print them separately 1b.Write YACC program to evaluate arithmetic expression involving operators: +, -, *, and /	Covered
03	27-04-22	2. Develop, Implement and Execute a program using YACC tool to recognize all strings ending with b preceded by n a's using the grammar a^n b(note: input n value)	Covered
04	04-05-22	3. Design, develop and implement YACC/C program to construct predictive /LL(1) parsing Table for the grammar rules: A->aBa , B->bB|E . Use this table to parse the sentence: abbu$	Covered
05	11-05-22	4.Design, develop and implement YACC/C program to demonstrate Shift Reduce Parsing technique for the grammar rules:E->E+T|T,T->T*F|F,F-> (E)|id and parse the sentence:id+id*id.	Covered
06	18-05-22	5. Design, develop and implement a C/Java program to generate the machine code using triples for the statement A =-B*(C+D) whose intermediate code in three-address form: T1=-B T2=C+D T3=T1+T2 A=T3	Covered
07	25-05-22	**INTERNALS –1 and Revision**	Conducted
08	01-06-22	6a. Write a LEX program to eliminate comment lines in a C program and copy the resulting program into a separate file. 6b.Write YACC program to recognize valid identifier,operators and keywords in the given text (c program) file.	Covered
09	08-06-22	7.Design, develop and implement a C/C++/Java program to simulate the working of Shortest remaining time and Round Robin (RR)	Covered

		scheduling algorithms. Experiment with different quantum sizes for RR algorithm.	
10	15-06-22	8.Design, develop and implement a C/C++/Java program to implement Banker's algorithm. Assume suitable input required to demonstrate the results.	Covered
11	22-06-22	9. Design, develop and implement a C/C++/Java program to implement page replacement algorithms LRU and FIFO. Assume suitable input required to demonstrate the results.	Covered
12	29-06-22	**INTERNALS –II and Revision**	Completed
13	13-07-22	**Final Lab Internals**	Completed
14	13-07-22	**Revision**	Covered

Course Instructors
[Basavesha D]

Head, Dept. of CSE
[Prof.C.V.Shanmukhaswamy]

PRINCIPAL
SJBIT, Bengaluru-560060

Shridevi Institute of Engineering and Technology, Tumkur-06
Academic Year 2021-22(Odd Sem)
DEPARTMENT OF COMPUTER SCIENCE & ENGG.

LABORATORY PLAN

Course Name: SYSTEM SOFTWARE LABORATORY **Course Code:18CSL66**

Class: VI Sem – A &batch (Tuesday)
Hours/Week: 03
Total Hours: 42

I.A. Marks: 20
Exam Hours: 03
Exam Marks: 100

Sl no.	DATE	TOPIC	Remarks
01	05-04-22	Revision or practice of sample programs	Covered
02	12-04-22	1a.Write a LEX program to recognize valid arithmetic expression.Identifiers in the expression could be only integers and operators could be + and *. Count the identifiers & operators present and print them separately 1b.Write YACC program to evaluate arithmetic expression involving operators: +, -, *, and /	Covered
03	19-04-22	2. Develop, Implement and Execute a program using YACC tool to recognize all strings ending with b preceded by n a's using the grammar a^n b(name: input n value)	Covered
04	26-04-22	3. Design, develop and implement YACC/C program to construct predictive /LL(1) parsing Table for the grammar rules: A->aBa , B->bB|E . Use this table to parse the sentence: abba$	Covered
05	10-05-22	4.Design, develop and implement YACC/C program to demonstrate Shift Reduce Parsing technique for the grammar rules:E->E+T|T,T->T*F|F,F-> (E)|id and parse the sentence:id+id*id.	Covered
06	17-05-22	5. Design, develop and implement a C/Java program to generate the machine code using triples for the statement A =-B*(C+D) whose intermediate code in three-address form: T1=-B T2=C+D T3=T1+T2 A=T3	Covered
07	24-05-22	**INTERNALS –1 and Revision**	Conducted
08	31-06-22	6a. Write a LEX program to eliminate comment lines in a C program and copy the resulting program into a separate file. 6b.Write YACC program to recognize valid identifier,operators and keywords in the given text (c program) file.	Covered
09	07-06-22	7.Design, develop and implement a C/C++/Java program to simulate the working of Shortest remaining time and Round Robin (RR)	Covered

		scheduling algorithms. Experiment with different quantum sizes for RR algorithm.	
10	14-06-22	8.Design, develop and implement a C/C++/Java program to implement Banker's algorithm. Assume suitable input required to demonstrate the results.	Covered
11	21-06-22	9. Design, develop and implement a C/C++/Java program to implement page replacement algorithms LRU and FIFO. Assume suitable input required to demonstrate the results.	Covered
12	28-06-22	**INTERNALS –II**	Conducted
13	12-07-22	**Final Lab Internals**	Conducted
14	12-07-22	**Revision of Programs**	Covered

Course Instructors
[Basavesha D]

Head, Dept of CSE
[Prof.C.V.Shanmukhaswamy]

PRINCIPAL
BIET, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2015 Certified Institution)
DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING
Academic Year 2021-22

PRACTICAL SESSION PLAN

Staff: Mr Suthan R
Course: SOFTWARE TESTING LABORATORY

Class: VI – AI(Monday)
Code: 18ISL67

Sl. No	Date	TOPIC	Remarks
1.	11/04/2022	Demo on Simple Programs	
2.	18/04/2022	Design and develop a program in a language of your choice to solve the triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Assume that the upper limit for the size of any side is 10. Derive test cases for your program based on boundary-value analysis, execute the test cases and discuss the results	Covered
3	25/04/2022	Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of boundary value testing, derive different test cases, execute these test cases and discuss the test results	Covered
4.	02/05/2022	Design and develop a program in a language of your choice to solve the triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Assume that the upper limit for the size of any side is 10. Derive test cases for your program based on equivalence class partitioning, execute the test cases and discuss the results	Covered
5.	09/05/2022	Design, develop, code and run the program in any suitable language to solve the commission Cproblem. Analyze it from the perspective of equivalence class testing, derive different test cases, execute these test cases and discuss the test results	Covered
6.	16/05/2022	Design, develop, code and run the program in any suitable language to implement the NextDate function. Analyze it from the perspective of equivalence class value testing, derive different test cases, execute these test cases and discuss the test results.	Covered
7.	30/05/2022	First Lab IA	Covered
8.	06/06/2022	Design and develop a program in a language of your choice to solve the triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Derive test cases for your program based on decision-table approach, execute the test cases and discuss the results	Covered
9.	13/06/2022	Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of decision table-based testing, derive different test cases, execute these test cases and discuss the test results	Covered
10.	14/06/2022	Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of dataflow testing, derive different test cases, execute these test cases and discuss the test results.	EXTRA Covered
11.	27/06/2022	Design, develop, code and run the program in any suitable language to implement the binary search algorithm. Determine the basis paths and using them derive different test cases, executethese test cases and discuss the test results.	Covered

8/06/2022	Design, develop, code and run the program in any suitable language to implement the quick sort algorithm. Determine the basis paths and using them derive different test cases, execute these test cases and discuss the test results.	EXTRA covered
05/07/2022	Design, develop, code and run the program in any suitable language to implement an absolute letter grading procedure, making suitable assumptions. Determine the basis paths and using them derive different test cases, execute these test cases and discuss the test results.	covered
11/07/2022	Second Lab IA	covered

[Mr Suthan R]
Staff-Incharge

[Dr Suhas G K]
HOD, Dept of ISE

PRINCIPAL
SIET, TUMAKURU

HOD
Dept. of ISE
SIET, Tumkur-72

FILE STRUCTURES LABORATORY WITH MINI PROJECT
(Effective from the academic year 2018 -2019)
SEMESTER – VI

Course Code	**18ISL67**	**CIE Marks**	40
Number of Contact Hours/Week	0:2:2	**SEE Marks**	60
Total Number of Lab Contact Hours	36	**Exam Hours**	03

Credits – 2

Course Learning Objectives: This course (18CISL67) will enable students to:

- Apply the concepts of Unix IPC to implement a given function.
- Measure the performance of different file structures
- Write a program to manage operations on given file system.
- Demonstrate hashing and indexing techniques

Descriptions (if any):

Programs List:

PART A

1.	Write a program to read series of names, one per line, from standard input and write these names spelled in reverse order to the standard output using I/O redirection and pipes. Repeat the exercise using an input file specified by the user instead of the standard input and using an output file specified by the user instead of the standard output.
2.	Write a program to read and write student objects with fixed-length records and the fields delimited by "|". Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.
3.	Write a program to read and write student objects with Variable - Length records using any suitable record structure. Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.
4.	Write a program to write student objects with Variable - Length records using any suitable record structure and to read from this file a student record using RRN.
5.	Write a program to implement simple index on primary key for a file of student objects. Implement add ( ), search ( ), delete ( ) using the index.
6.	Write a program to implement index on secondary key, the name, for a file of student objects. Implement add ( ), search ( ), delete ( ) using the secondary index.
7.	Write a program to read two lists of names and then match the names in the two lists using Consequential Match based on a single loop. Output the names common to both the lists.
8.	Write a program to read k Lists of names and merge them using k-way merge algorithm with k = 8.

PART B MINI PROJECT

Student should develop mini project on the topics mentioned below or similar applications **Document processing, transaction management, indexing and hashing, buffer management, configuration management. Not limited to these.**

Laboratory Outcomes: The student should be able to:

- Implement operations related to files
- Apply the concepts of file system to produce the given application.
- Evaluate performance of various file systems on given parameters.

Conduct of Practical Examination:

- All laboratory experiments, excluding the first, are to be included for practical examination.
- Experiment distribution
  - For questions having only one part: Students are allowed to pick one experiment from the lot and are given equal opportunity.
  - For questions having part A and B: Students are allowed to pick one experiment from part A and one experiment from part B and are given equal opportunity.

- Change of experiment is allowed only once and marks allotted for procedure part to be made zero.
- Marks Distribution *(Courtesy to change in accordance with university regulations)*
  - o) For questions having only one part – Procedure + Execution + Viva-Voce: 15+70+15 = 100 Marks
  - p) For questions having part A and B
    - i. Part A – Procedure + Execution + Viva = 4 + 21 + 5 = 30 Marks
    - ii. Part B – Procedure + Execution + Viva = 10 + 49+ 11 = 70 Marks

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Course Syllabus

FACULTY NAME :	Mr. Kiran G M		
SUBJECT:	FILE STRUCTURES LAIBORATORY WITH MINI PROJECT		
SUBJECT CODE:	18ISL67	ACADEMIC YEAR	2022-23(EVEN)
NUMBER OF LECTURE HOURS/WEEK	01I + 02P	TOTAL NUMBER OF LECTURE HOURS	40

Course Overview

It is relatively easy to come up with file structure designs that meet the general goals when the files never change. But when files grow or shrink, when information is added and deleted, it is much more difficult to handle the scenario, hence need of file structure arises. As files grew very large, unaided sequential access was not a good solution. Later Disks also allowed for direct access. Hence need of good file structure design (Such as sorting, indexing and hashing) need for the designing a solution model for a file structure problem.

File Structures describes the fundamental Concepts for storing and handling files. By using appropriate file structure and file organization, solution to be designed for real world problem. And also explains the Importance of file structure design in secondary storage devices. We learn how to apply the object oriented concepts as toolkit for various file structure problems.

Students are able to understand the Concept of file structure and secondary storage devices Students are also able to apply and analyze the appropriate design (Such as sorting, indexing and hashing) for storage and data manipulation using object oriented programming language.

Course Objectives

- Explain the fundamentals of file structures and their management.
- Measure the performaece of different file structures.
- Organize different file structures in the memory.
- Demonstrate indexing techniques.

Laboratory Experiments

PART- A

1. Write a program to read series of names, one per line, from standard input and write these names spelled in reverse order to the standard output using I/O redirection and pipes. Repeat the exercise using an input file specified by the user instead of the standard input and using an output file specified by the user instead of the standard output.
2. Write a program to read and write student objects with fixed-length records and the fields delimited by "|". Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.
3. Write a program to read and write student objects with Variable - Length records using any suitable record structure. Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.
4. Write a program to write student objects with Variable - Length records using any suitable record structure and to read from this file a student record using RRN.
5. Write a program to implement simple index on primary key for a file of student objects. Implement add ( ), search ( ), delete ( ) using the index.
6. Write a program to implement index on secondary key, the name, for a file of student objects. Implement add ( ), search ( ), delete ( ) using the secondary index.
7. Write a program to read two lists of names and then match the names in the two lists using Consequential Match based on a single loop. Output the names common to both the lists.
8. Write a program to read k Lists of names and merge them using k-way merge algorithm with k = 8.

PART-B: Mini Project (Max. Exam Marks. 30)

Student should develop mini project on the topics mentioned below or similar applications

Document processing, transaction management, indexing and hashing, buffer management, configuration management. Not limited to these.

Kiran G M
Staff Incharge

Dr Suhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (APR-JUL 2022)

FACULTY NAME:	Mr. Kiran G M		
SUBJECT:	FILE STRUCTURES LABORATORY WITH MINI PROJECT		
SUBJECT CODE:	18ISL67		
HOURS/WEEK:	01I+02P	TOTAL HOURS:	40
SEMESTER:	6	SECTION:	B

Class No	Topics proposed to be covered	BATCH 1	
		Proposed date	Actual date
1	**Introduction:** File Structures: Basic examples. Basic examples for file operation, Reading and writing.Execution of java sample programs.	08/04/22	8/4/22
2	Write a program to read series of names, one per line, from standard input and write these names spelled in reverse order to the standard output using I/O redirection and pipes. Repeat the exercise using an input file specified by the user instead of the standard input and using an output file specified by the user instead of the standard output.	15/04/22	15/4/22
3	Write a program to read and write student objects with fixed-length records and the fields delimited by "|". Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.	22/04/22	22/4/22
4	Write a program to read and write student objects with Variable - Length records using any suitable record structure. Implement pack ( ), unpack ( ), modify ( ) and search ( ) methods.	29/04/22	29/4/22
5	TEST-I	06/05/22	6/5/22
6	Write a program to write student objects with Variable - Length records using any suitable record structure and to read from this file a student record using RRN.	13/05/22	13/5/22
7	Write a program to implement simple index on primary key for a file of student objects. Implement add ( ), search ( ), delete ( ) using the index.	20/05/22	20/5/22
8	Write a program to implement index on secondary key, the name, for a file of student objects. Implement add ( ), search ( ), delete ( ) using the secondary index.	27/05/22	27/5/22
9	Write a program to read two lists of names and then match the names in the two lists using Consequential Match based on a single loop. Output the names common to both the lists.	03/06/22	3/6/22

10	Write a program to read k Lists of names and merge them using k-way merge algorithm with k = 8.	10/06/22	10/6/22
11	REPETATION	17/06/22	17/6/22
11	TEST-2	24/06/22	24/6/22

Kiran G M
Staff Incharge

Dr Suhas G K
HOD,ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE
OF ENGG & TECHNOLOGY
TUMAKURU-572 106

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

SUBJECT LECTURE PLAN (Lab)

Semester : **VI B SECTION (B2)** Year:**2021-22**

Subject Title: Mobile Application Development	Subject Code: 18CSMP68
Total No. of Practical Hrs: 2 hr / Week	Duration of Exam: 03 Hrs
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 14/05/2022
Checked by: Prof. Shanmuka Swamy C V	Date: 14/05/2022

Objectives:

- Build an application using Android development environment.
- Experiment with the method of storing, sharing and retrieving the data in Android Applications.
- Examine responsive user interface across wide range of devices.
- Create a mobile Application by using various components like activity, views, services, content providers and receivers.

Outcomes:

- Build an application using Android development environment.
- Experiment with the method of storing, sharing and retrieving the data in Android Applications.
- Examine responsive user interface across wide range of devices.
- Create a mobile Application by using various components like activity,views,services,content providers and receivers.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	12/04/22	Create an application to design a Visiting Card. The Visiting card should have a company logo at the top right corner. The company name should be displayed in Capital letters, aligned to the center. Information like the name of the employee, job title, phone number, address, email, fax and the website address is to be displayed. Insert a horizontal line between the job title and the phone number.		
2	19/04/22	Develop an Android application using controls like Button, TextView, EditText for designing a Calculator having basic functionality like Addition, Subtraction, Multiplication, and Division.		
3	26/04/22	Create a SIGN Up activity with Username and Password. Validation of password should happen based on the following rules: i. Password should contain uppercase and lowercase letters. ii. Password should contain letters and numbers. iii. Password should contain special characters. iv. Minimum length of the password (the default value is 8). On successful SIGN UP proceed to the next Login activity. Here the user should SIGN IN using the Username and Password created during signup activity. If the Username and Password are matched then navigate to the next activity which displays a message saying "Successful Login" or else display a toast message saying "Login Failed". The user is given only two attempts and after that display a toast message saying "Failed Login Attempts" and disable the SIGN IN button. Use Bundle to transfer information from one activity to another.		
4	3/05/22	Develop an application to set an image as wallpaper. On click of a button, the wallpaper image should start to change randomly every 30 seconds.		
5	10/05/22	Write a program to create an activity with two buttons START and STOP. On Pressing of the START button, the activity must start the counter by displaying the numbers from One and the counter must keep on counting until the STOP button is pressed. Display the counter value in a TextView control.		
6	17/05/22	Create two files of XML and JSON type with values for City_Name, Latitude, Longitude, Temperature, and Humidity. Develop an application to create an activity with two buttons to parse the XML and JSON files which when clicked should display the data in their respective layouts side by side.		
7	31/05/22	Develop a simple application with one Edit Text so that the user can write some text in it. Create a button called "Convert Text to Speech" that converts the user input text into voice.		
8	7/06/22	Create an activity like a phone dialer with CALL and SAVE		

		buttons. On pressing the CALL button, it must call the phone number and on pressing the SAVE button it must save the number to the phone contacts.		
9	14/06/22	IA – 1		
10	21/6/22	Mini Project Execution (Part B)		
11	28/6/22	Mini Project Execution (Part B)		
12	5/7/22	Mini Project Execution (Part B)		
13	12/7/22	Mini Project Demo and IA		

Reference Books

1. Google Developer Training, "Android Developer Fundamentals Course – Concept Reference", Google Developer Training Team, 2017. https://www.gitbook.com/book/google-developer-training/android-developer-fundamentals-course-concepts/details (Download pdf file from the above link)
2. Erik Hellman, "Android Programming – Pushing the Limits", 1st Edition, Wiley India Pvt Ltd, 2014. ISBN-13: 978-8126547197
3. Dawn Griffiths and David Griffiths, "Head First Android Development", 1st Edition, O'Reilly SPD Publishers, 2015. ISBN-13: 978-9352131341
4. Bill Phillips, Chris Stewart and Kristin Marsicano, "Android Programming: The Big Nerd Ranch Guide", 3rd Edition, Big Nerd Ranch Guides, 2017. ISBN-13: 978-0134706054
5. Data from Global Academy of Technology

Dr. Charan K V
Staff in charge

Prof. Shanmukha Swamy C V
HOD- CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
BANGALORE INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2021- 22 (Even Semester)

SUBJECT LECTURE PLAN (Lab)

Semester : VI B SECTION (G1) Year: 2021-22

Subject Title: Mobile Application Development	Subject Code: 18CSMP68
Total No. of Practical Hrs: 2 hr / Week	Duration of Exam: 03 Hrs.
Total exam marks: 60	Total I.A. marks: 40
Lesson plan author: Dr. Charan K V	Date: 14/05/2022
Checked by: Prof. Shanmuka Swamy C V	Date: 14/05/2022

Objectives:

- Build an application using Android development environment.
- Experiment with the method of storing, sharing and retrieving the data in Android Applications.
- Examine responsive user interface across wide range of devices.
- Create a mobile Application by using various components like activity, views, services, content providers and receivers.

Outcomes:

- Build an application using Android development environment.
- Experiment with the method of storing, sharing and retrieving the data in Android Applications.
- Examine responsive user interface across wide range of devices.
- Create a mobile Application by using various components like activity,views,services,content providers and receivers.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
		PART – A		
1	15/04/22	Create an application to design a Visiting Card. The Visiting card should have a company logo at the top right corner. The company name should be displayed in Capital letters, aligned to the center. Information like the name of the employee, job title, phone number, address, email, fax and the website address is to be displayed. Insert a horizontal line between the job title and the phone number.		
2	22/04/22	Develop an Android application using controls like Button, TextView, EditText for designing a Calculator having basic functionality like Addition, Subtraction, Multiplication, and Division.		
3	29/04/22	Create a SIGN Up activity with Username and Password. Validation of password should happen based on the following rules: i. Password should contain uppercase and lowercase letters. ii. Password should contain letters and numbers. iii. Password should contain special characters. iv. Minimum length of the password (the default value is 8). On successful SIGN UP proceed to the next Login activity. Here the user should SIGN IN using the Username and Password created during signup activity. If the Username and Password are matched then navigate to the next activity which displays a message saying "Successful Login" or else display a toast message saying "Login Failed". The user is given only two attempts and after that display a toast message saying "Failed Login Attempts" and disable the SIGN IN button. Use Bundle to transfer information from one activity to another.		
4	6/05/22	Develop an application to set an image as wallpaper. On click of a button, the wallpaper image should start to change randomly every 30 seconds.		
5	13/05/22	Write a program to create an activity with two buttons START and STOP. On Pressing of the START button, the activity must start the counter by displaying the numbers from One and the counter must keep on counting until the STOP button is pressed. Display the counter value in a TextView control.		
6	20/05/22	Create two files of XML and JSON type with values for City_Name, Latitude, Longitude, Temperature, and Humidity. Develop an application to create an activity with two buttons to parse the XML and JSON files which when clicked should display the data in their respective layouts side by side.		
7	27/05/22	Develop a simple application with one Edit Text so that the user can write some text in it. Create a button called "Convert Text to Speech" that converts the user input text into voice.		
8	3/06/22	Create an activity like a phone dialer with CALL and SAVE		

		buttons. On pressing the CALL button, it must call the phone number and on pressing the SAVE button it must save the number to the phone contacts.		
9	10/06/22	IA – 1		
10	17/6/22	Mini Project Execution (Part B)		
11	24/6/22	Mini Project Execution (Part B)		
12	1/7/22	Mini Project Execution (Part B)		
13	8/7/22	Mini Project Execution (Part B)		
14	15/7/22	Mini Project Demo and IA –2		

Reference Books

1. Google Developer Training, "Android Developer Fundamentals Course – Concept Reference", Google Developer Training Team, 2017. https://www.gitbook.com/book/google-developer-training/android-developer- fundamentals-course-concepts/details
   (Download pdf file from the above link)
2. Erik Hellman, "Android Programming – Pushing the Limits", 1st Edition, Wiley India Pvt Ltd, 2014. ISBN-13: 978-8126547197
3. Dawn Griffiths and David Griffiths, "Head First Android Development", 1 st Edition, O_Reilly SPD Publishers, 2015. ISBN-13: 978-9352131341
4. Bill Phillips, Chris Stewart and Kristin Marsicano, "Android Programming: The Big Nerd Ranch Guide", 3rd Edition, Big Nerd Ranch Guides, 2017. ISBN-13: 978-0134706054

Dr. Charan K V
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Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR-572106
ACADEMIC YEAR 2017-18 (EVEN SEM)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN

Staff: Renukaradhya P C | **Sub: Computer Graphics laboratory with mini project**
Sem: VI Sem, ' A1 ' Batch | **Sub Code: 18CSL68**

SL NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
1	04/04/22	**PART – A:** Introduction to basic concepts	Covered	
2	11/04/22	1. Implement Brenham's line drawing algorithm for all types of slope.	Covered	
3	18/04/22	2. Create and rotate a triangle about the origin and a fixed point.	Covered	
4	25/04/22	3. Draw a color cube and spin it using OpenGL transformation matrices.	Covered	
5	02/05/22	4. Draw a color cube and allow the user to move the camera suitably to experiment with perspective viewing.	Covered	
6	09/05/22	5. Clip a lines using Cohen-Sutherland algorithm	Covered	
7	16/05/22	**Internals-I** 6. To draw a simple shaded scene consisting of a tea pot on a table. Define suitably the position and properties of the light source along with the properties of the surfaces of the solid object used in the scene.	Covered	
8	30/05/22	7. Design, develop and implement recursively subdivide a tetrahedron to form 3D sierpinski gasket. The number of recursive steps is to be specified by the user.	Covered	
9	06/06/22	8. Develop a menu driven program to animate a flag using Bezier Curve algorithm	Covered	
10	13/06/22	9. Develop a menu driven program to fill the polygon using scan line algorithm	Covered	
11	13/06/22	**Internals-II** **PART – B:**Develop a suitable Graphics package to implement the skills learnt in the theory and the exercises indicated in Part A. Use the OpenGL.	Covered	Extra Lab
12	27/06/22	Project work	Covered	
13	04/07/22	Project work continued.	Covered	
14	11/07/22	**Internals-III**	Covered	
		Internals-III	Covered	

[Mr. Renukradhya P C]
Staff Incharge

[Prof. C.Y. Shanmukaswamy]
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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR-572106
ACADEMIC YEAR 2017-18 (EVEN SEM)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN

Staff: Renukaradhya P C | **Sub: Computer Graphics laboratory with mini project**
Sem: VI Sem, ' A2 ' Batch | **Sub Code: 18CSL68**

SL NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
1	13/04/22	**PART – A:** Introduction basic concepts	Covered	
2	20/04/22	1. Implement Brenham's line drawing algorithm for all types of slope.	Covered	
3	27/04/22	2. Create and rotate a triangle about the origin and a fixed point.	Covered	
4	04/05/22	3. Draw a color cube and spin it using OpenGL transformation matrices.	Covered	
5	11/05/22	4. Draw a color cube and allow the user to move the camera suitably to experiment with perspective viewing.	Covered	
6	18/05/22	5. Clip a lines using Cohen-Sutherland algorithm	Covered	
7	25/05/22	**Internals-I** 6. To draw a simple shaded scene consisting of a tea pot on a table. Define suitably the position and properties of the light source along with the properties of the surfaces of the solid object used in the scene.	Covered	
8	01/06/22	7. Design, develop and implement recursively subdivide a tetrahedron to form 3D sierpinski gasket. The number of recursive steps is to be specified by the user.	Covered	
9	08/06/22	8. Develop a menu driven program to animate a flag using Bezier Curve algorithm	Covered	
10	15/06/22	9. Develop a menu driven program to fill the polygon using scan line algorithm	Covered	
11	22/06/22	**Internals-II** **PART – B:**Develop a suitable Graphics package to implement the skills learnt in the theory and the exercises indicated in Part A. Use the OpenGL.	Covered	
12	29/06/22	Project work	Covered	
13	06/07/22	Project work continued.	Covered	
14	13/07/22	**Internals-III**	Covered	

[Mr. Renukaradhya P C]
Staff Incharge

[Prof. C.V Shanmukaswamy]
HOD, CSE

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TUMKUR-572106
ACADEMIC YEAR 2017-18 (EVEN SEM)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN

Staff: Renukaradhya P C | **Sub: Computer Graphics laboratory with mini project**
Sem: VI Sem, ' A3 ' Batch | **Sub Code: 18CSL68**

SL NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
1	22/04/22	**PART – A:** Introduction basic concepts	Covered	
2	29/04/22	1. Implement Brenham's line drawing algorithm for all types of slope.	Covered	
3	06/05/22	2. Create and rotate a triangle about the origin and a fixed point.	Covered	
4	06/05/22	3. Draw a color cube and spin it using OpenGL transformation matrices.	Covered	Extra Lab
5	13/05/22	4. Draw a color cube and allow the user to move the camera suitably to experiment with perspective viewing.	Covered	
6	27/05/22	5. Clip a lines using Cohen-Sutherland algorithm	Covered	
7	27/05/22	**Internals-I** 6. To draw a simple shaded scene consisting of a tea pot on a table. Define suitably the position and properties of the light source along with the properties of the surfaces of the solid object used in the scene.	Covered	Extra Lab
8	03/06/22	7. Design, develop and implement recursively subdivide a tetrahedron to form 3D sierpinski gasket. The number of recursive steps is to be specified by the user.	Covered	
9	03/06/22	8. Develop a menu driven program to animate a flag using Bezier Curve algorithm	Covered	Extra Lab
10	24/06/22	9. Develop a menu driven program to fill the polygon using scan line algorithm	Covered	
11	24/06/22	**Internals-II** **PART – B:**Develop a suitable Graphics package to implement the skills learnt in the theory and the exercises indicated in Part A. Use the OpenGL.	Covered	Extra Lab
12	01/07/22	Project work	Covered	
13	08/07/22	Project work continued.	Covered	
14	08/07/22	**Internals-III**	Covered	Extra Lab
			Covered	

[Mr. Renukradhya P C]
Staff Incharge

[Prof. G.V. Shanmukaswamy]
HOD, CSE

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ACADEMIC YEAR 2017-18 (EVEN SEM)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN

Staff: Renukaradhya P C | **Sub: Computer Graphics laboratory with mini project**
Sem: VI Sem, ' B1 ' Batch | **Sub Code: 18CSL68**

SL NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
1	04/04/22	**PART – A:** Introduction basic concepts	Covered	
2	11/04/22	1. Implement Beenham's line drawing algorithm for all types of slope.	Covered	
3	18/04/22	2. Create and rotate a triangle about the origin and a fixed point.	Covered	
4	25/04/22	3. Draw a color cube and spin it using OpenGL transformation matrices.	Covered	
5	02/05/22	4. Draw a color cube and allow the user to move the camera suitably to experiment with perspective viewing.	Covered	
6	09/05/22	5. Clip a lines using Cohen-Sutherland algorithm	Covered	
7	16/05/22	**Internals-I** 6. To draw a simple shaded scene consisting of a tea pot on a table. Define suitably the position and properties of the light source along with the properties of the surfaces of the solid object used in the scene.	Covered	
8	30/05/22	7. Design, develop and implement recursively subdivide a tetrahedron to form 3D sierpinski gasket. The number of recursive steps is to be specified by the user.	Covered	
9	06/06/22	8. Develop a menu driven program to animate a flag using Bezier Curve algorithm	Covered	
10	13/06/22	9. Develop a menu driven program to fill the polygon using scan line algorithm	Covered	
11	13/06/22	**Internals-II** **PART – B:**Develop a suitable Graphics package to implement the skills learnt in the theory and the exercises indicated in Part A. Use the OpenGL.	Covered	Extra Lab
12	27/06/22	Project work	Covered	
13	04/07/22	Project work continued.	Covered	
14	11/07/22	**Internals-III**	Covered	

[Mr. Renukaradhya P C]
Staff Incharge

[Prof. C.Y. Shanmukaswamy]
HOD, CSE

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TUMKUR-572106
ACADEMIC YEAR 2017-18 (EVEN SEM)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LAB PLAN

Staff: Renukaradhya P C | **Sub: Computer Graphics laboratory with mini project**
Sem: VI Sem | **Sub Code: 18CSL68**

SL NO.	DATE	TOPICS PLANNED	TOPICS COVERED	REMARKS
1	WEEK 1	PART – A: Introduction basic concepts	Covered	
2	WEEK 2	1. Implement Brenham's line drawing algorithm for all types of slope.	Covered	
3	WEEK 3	2. Create and rotate a triangle about the origin and a fixed point.	Covered	
4	WEEK 4	3. Draw a color cube and spin it using OpenGL transformation matrices.	Covered	
5	WEEK 5	4. Draw a color cube and allow the user to move the camera suitably to experiment with perspective viewing.	Covered	
6	WEEK 6	5. Clip a lines using Cohen-Sutherland algorithm	Covered	
7	WEEK7	**Internals-I** 6. To draw a simple shaded scene consisting of a tea pot on a table. Define suitably the position and properties of the light source along with the properties of the surfaces of the solid object used in the scene.	Covered	
8	WEEK 8	7. Design, develop and implement recursively subdivide a tetrahedron to form 3D sierpinski gasket. The number of recursive steps is to be specified by the user.	Covered	
9	WEEK 9	8. Develop a menu driven program to animate a flag using Bezier Curve algorithm	Covered	
10	WEEK 10	9. Develop a menu driven program to fill the polygon using scan line algorithm	Covered	
11	WEEK 11	**Internals-II** **PART – B:**Develop a suitable Graphics package to implement the skills learnt in the theory and the exercises indicated in Part A. Use the OpenGL.	Covered	
12	WEEK 12	Project work	Covered	
13	WEEK 13	Project work continued.	Covered	
14	WEEK 14	**Internals-III**	Covered	

[Mr. Renukaradhya P C]
Staff Incharge

[Prof. C.V Shanmukaswamy]
HOD, CSE

PRINCIPAL
SIET, TUMKUR

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021– JAN 2022) MACRO SCHEDULE

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	~~18CS72~~ 18CS72	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Understand fundamentals of Big Data analytics
- Explore the Hadoop framework and Hadoop Distributed File system
- Illustrate the concepts of NoSQL using MongoDB and Cassandra for Big Data
- Employ MapReduce programming model to process the big data
- Understand various machine learning algorithms for Big Data Analytics, Web Mining and Social Network Analysis.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	01.010.2021 to 30.10.2021	**Module-1:** Introduction to Big Data Analytics: Big Data, Scalability and Parallel Processing, Designing Data Architecture, Data Sources, Quality, Pre-Processing and Storing, Data Storage and Analysis, Big Data Analytics Applications and Case Studies. **No. of Contact Sessions: 13**	https://www.youtube.com/results?search_query=Introduction+to+Big+Data+Analytics
2	02.11.2021 to 24.11.2021	**Module-2** Introduction to Hadoop (T1): Introduction, Hadoop and its Ecosystem, Hadoop Distributed File System, MapReduce Framework and Programming Model, Hadoop Yarn, Hadoop Ecosystem Tools. Hadoop Distributed File System Basics (T2): HDFS Design Features, Components, HDFS User Commands. Essential Hadoop Tools (T2): Using Apache Pig, Hive, Sqoop, Flume, Oozie, HBase. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Introduction+to+Hadoop
3	26.11.2021 to 11.12.2021	**Module -3:** NoSQL Big Data Management, MongoDB and Cassandra: Introduction, NoSQL Data Store, NoSQL Data Architecture Patterns, NoSQL to Manage Big Data, Shared-Nothing Architecture for Big Data Tasks, MongoDB, Databases, Cassandra Databases, No.	https://www.youtube.com/results?search_query=%3A+NoSQL+Big+Data+Management%2C+MongoDB+and+Cassandra

		of Contact Sessions: 10	
4	**14.12.2021 to 05.01.2022**	**Module -4** MapReduce, Hive and Pig: Introduction, MapReduce Map Tasks, Reduce Tasks and MapReduce Execution, Composing MapReduce for Calculations and Algorithms, Hive, HiveQL, Pig **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=MapReduce%2C+Hive+and+Pig
5	**07.01.2022 to 29.01.2022**	**Module -5** Machine Learning Algorithms for Big Data Analytics: Introduction, Estimating the relationships, Outliers, Variances, Probability Distributions, and Correlations, Regression analysis, Finding Similar Items, Similarity of Sets and Collaborative Filtering, Frequent Itemsets and Association Rule Mining. Text, Web Content, Link, and Social Network Analytics: Introduction, Text mining, Web Mining, Web Content and Web Usage Analytics, Page Rank, Structure of Web and analyzing a Web Graph, Social Network as Graphs and Social Network Analytics: **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Machine+Learning+Algorithms+for+Big+Data+Analytics

TEXT BOOKS:

Text Books:

1. Raj Kamal and Preeti Saxena, "Big Data Analytics Introduction to Hadoop, Spark, and Machine-Learning", McGraw Hill Education, 2018 ISBN: 9789353164966, 9353164966

2. Douglas Eadline, "Hadoop 2 Quick-Start Guide: Learn the Essentials of Big Data Computing in the pache Hadoop 2 Ecosystem", 1 stEdition, Pearson Education, 2016. ISBN13: 978-9332570351

REFERENCE BOOKS:

1) Tom White, **"Hadoop: The Definitive Guide"**, 4 Edition, O'Reilly Media,

2) Boris Lublinsky, Kevin T.Smith, Alexey Yakubovich,**"Professional Hadoop Solutions"**, 1 st Edition, Wrox Press, 2014ISBN-13: 978-8126551071

3) Eric Sammer,**"Hadoop Operations: A Guide for Developers and Administrators"**,1° Edition, O'Reilly Media, 2012.ISBN-13: 978-9350239261

4. Arshdeep Bahga, Vijay Madisetti, "Big Data Analytics: A Hands-On Approach", 1st Edition, VPT Publications, 2018. ISBN-13: 978-0996025577

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021– JAN 2022) MACRO SCHEDULE

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	~~18CS82~~ 18CS72	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Understand fundamentals of Big Data analytics
- Explore the Hadoop framework and Hadoop Distributed File system
- Illustrate the concepts of NoSQL using MongoDB and Cassandra for Big Data
- Employ MapReduce programming model to process the big data
- Understand various machine learning algorithms for Big Data Analytics, Web Mining and Social Network Analysis.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	01.010.2021 to 30.10.2021	**Module-1:** Introduction to Big Data Analytics: Big Data, Scalability and Parallel Processing, Designing Data Architecture, Data Sources, Quality, Pre-Processing and Storing, Data Storage and Analysis, Big Data Analytics Applications and Case Studies. **No. of Contact Sessions: 13**	https://www.youtube.com/results?search_query=Introduction+to+Big+Data+Analytics
2	02.11.2021 to 24.11.2021	**Module-2** Introduction to Hadoop (T1): Introduction, Hadoop and its Ecosystem, Hadoop Distributed File System, MapReduce Framework and Programming Model, Hadoop Yarn, Hadoop Ecosystem Tools. Hadoop Distributed File System Basics (T2): HDFS Design Features, Components, HDFS User Commands. Essential Hadoop Tools (T2): Using Apache Pig, Hive, Sqoop, Flume, Oozie, HBase. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Introduction+to+Hadoop
3	26.11.2021 to 11.12.2021	**Module -3:** NoSQL Big Data Management, MongoDB and Cassandra: Introduction, NoSQL Data Store, NoSQL Data Architecture Patterns, NoSQL to Manage Big Data, Shared-Nothing Architecture for Big Data Tasks, MongoDB, Databases, Cassandra Databases. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=%3A+NoSQL+Big+Data+Management%2C+MongoDB+and+Cassandra

4	14.12.2021 to 05.01.2022	**Module -4** MapReduce, Hive and Pig: Introduction, MapReduce Map Tasks, Reduce Tasks and MapReduce Execution, Composing MapReduce for Calculations and Algorithms, Hive, HiveQL, Pig **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=MapReduce%2C+Hive+and+Pig
5	07.01.2022 to 29.01.2022	**Module -5** Machine Learning Algorithms for Big Data Analytics: Introduction, Estimating the relationships, Outliers, Variances, Probability Distributions, and Correlations, Regression analysis, Finding Similar Items, Similarity of Sets and Collaborative Filtering, Frequent Itemsets and Association Rule Mining. Text, Web Content, Link, and Social Network Analytics: Introduction, Text mining, Web Mining, Web Content and Web Usage Analytics, Page Rank, Structure of Web and analyzing a Web Graph, Social Network as Graphs and Social Network Analytics: **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=Machine+Learning+Algorithms+for+Big+Data+Analytics

TEXT BOOKS:

Text Books:

1. Raj Kamal and Preeti Saxena, "Big Data Analytics Introduction to Hadoop, Spark, and Machine-Learning", McGraw Hill Education, 2018 ISBN: 9789353164966, 9353164966

2. Douglas Eadline, "Hadoop 2 Quick-Start Guide: Learn the Essentials of Big Data Computing in the Apache Hadoop 2 Ecosystem", 1 stEdition, Pearson Education, 2016. ISBN13: 978-9332570351

REFERENCE BOOKS:

1) Tom White, **"Hadoop: The Definitive Guide"**, 4 Edition, O'Reilly Media.

2) Boris Lublinsky, Kevin T.Smith, Alexey Yakubovich,**"Professional Hadoop Solutions"**, 1 st Edition, Wrox Press, 2014ISBN-13: 978-8126551071

3) Eric Sammer,**"Hadoop Operations: A Guide for Developers and Administrators"**,1st Edition, O'Reilly Media, 2012.ISBN-13: 978-9350239261

4. Arshdeep Bahga, Vijay Madisetti, "Big Data Analytics: A Hands-On Approach", 1st Edition, VPT Publications, 2018. ISBN-13: 978-0996025577

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SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 - JAN 2022) MICRO SCHEDULE

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	18CS82	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05-10-21	TUE	Introduction to Big Data Analytics: Big Data	Covered	
2	08-10-21	WED	Scalability and Parallel Processing,	Covered	
3	09-10-21	FRI	Designing Data Architecture	Covered	
4	12-10-21	SAT	Designing Data Architecture	Covered	
5	13-10-21	TUE	Data Sources, Quality	Covered	
6	16-10-21	WED	Pre-Processing and Storing	Covered	
7	19-10-21	FRI	Pre-Processing and Storing	Covered	
8	22-10-21	SAT	Data Storage and Analysis	Covered	
9	23-10-21	TUE	Data Storage and Analysis	Covered	
10	26-10-21	WED	Big Data Analytics Applications and	Covered	
11	27-10-21	FRI	Big Data Analytics Applications and	Covered	
12	29-10-21	SAT	Case Studies.	Covered	
13	30-10-21	TUE	Case Studies.	Covered	

SUMMARY

PLANNED DATE	FROM: 05-10-21	TO: 30-10-21
ACTUAL CLASSES TAKEN	FROM: 5-10-21	TO: 30-10-21

NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: Yes
	QUIZ: - NO -	SEMINARS: - NO -	ANY OTHER: -

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MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
14	02-11-21	WED	**Module-2** Introduction to Hadoop (T1): Introduction	Covered	
15	06-11-21	FRI	Hadoop and its Ecosystem	Covered	
16	09-11-21	SAT	Hadoop Distributed File System,	Covered	
17	10-11-21	TUE	MapReduce Framework and Programming Model	Covered	
18	12-11-21	WED	Hadoop Yarn, Hadoop Ecosystem Tools.	Covered	
19	13-11-21	FRI	Hadoop Distributed File System Basics (T2): HDFS Design Features	Covered	
20	16-11-21	SAT	Components, HDFS User Commands	Covered	
21	17-11-21	TUE	Essential Hadoop Tools (T2): Using Apache Pig	Covered	
22	23-11-21	WED	Hive, Sqoop,	Covered	
23	24-11-21	FRI	Flume, Oozie, HBase.	Covered	

SUMMARY

PLANNED DATE	FROM: 02-11-21	TO: 24-11-21	
ACTUAL CLASSES TAKEN	FROM: 2-11-21	TO: 24-11-21	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION:
	QUIZ: -	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	26-11-21	TUE	**Module-3:** NoSQL Big Data Management,	Covered	
25	27-11-21	WED	MongoDB and Cassandra: Introduction,	Covered	
26	30-11-21	FRI	NoSQL Data Store	Covered	
27	01-12-21	SAT	NoSQL Data Store	Covered	
28	03-12-21	TUE	NoSQL Data Architecture Patterns	Covered	
29	04-12-21	WED	NoSQL Data Architecture Patterns	covered	
30	07-12-21	FRI	NoSQL to Manage Big Data,	Covered	
31	08-12-21	SAT	Shared-Nothing Architecture for Big Data Tasks,	Covered	
32	10-12-21	TUE	MongoDB, Databases,	Covered	
33	11-12-21	WED	Cassandra Databases.	Covered	

SUMMARY

PLANNED DATE	**FROM: 26-11-21**	**TO: 11-12-21**	
ACTUAL CLASSES TAKEN	**FROM:** 26-11-21	**TO:** 11-12-21	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** \	**TUTORIALS:** |	**QP DISCUSSION:**
	QUIZ: —	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	14-12-21	FRI	MapReduce, Hive and Pig: Introduction	Covered	
35	15-12-21	SAT	MapReduce Map Tasks	covered	
36	17-12-21	TUE	MapReduce Map Tasks	Covered	
37	18-12-21	WED	Reduce Tasks and MapReduce Execution,	Covered	
38	21-12-21	FRI	Reduce Tasks and MapReduce Execution,	Covered	
39	22-12-21	SAT	Composing MapReduce for Calculations and Algorithms	Covered	
40	24-12-21	TUE	Composing MapReduce for Calculations and Algorithms	Covered	
41	01-01-22	WED	Composing MapReduce for Calculations and Algorithms	Covered	
42	04-01-22	FRI	Hive, HiveQL, Pig	Covered	
43	05-01-22	SAT	Hive, HiveQL, Pig	Covered	

SUMMARY

PLANNED DATE	FROM: 14-12-21	TO: 05-01-22	
ACTUAL CLASSES TAKEN	FROM: 14-12-21	TO: 5-1-22	
NUMBER OF CLASSES	ALLOCATED: 13	TAKEN: 13	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION:
	QUIZ: —	SEMINARS:	ANY OTHER:

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
44	07-01-22	TUE	**Module -5** Machine Learning Algorithms for Big Data Analytics:	Covered	
45	08-01-22	WED	Introduction, Estimating the relationships, Outliers, Variances,	Covered	
46	11-01-22	FRI	Probability Distributions, and Correlations,	Covered	
47	12-01-22	SAT	Regression analysis, Finding Similar Items,	Covered	
48	15-01-22	TUE	Similarity of Sets and Collaborative Filtering,	Covered	
50	18-01-22	WED	Frequent Itemsets and Association Rule Mining	Covered	
51	19-01-22	FRI	Text, Web Content, Link, and Social Network Analytics:	Covered	
52	25-01-22	SAT	Introduction, Text mining, Web Mining, Web Content and Web Usage Analytics,	Covered	
53	28-01-22	TUE	Page Rank, Structure of Web and analyzing a Web Graph,:	Covered	
54	29-01-22	WED	Social Network as Graphs and Social Network Analytics	Covered	

SUMMARY

PLANNED DATE	**FROM: 07-01-22**	**TO: 29-01-22**	
ACTUAL CLASSES TAKEN	**FROM:** 7-1-22	**TO:** 29-1-22	
NUMBER OF CLASSES	**ALLOCATED: 14**	**TAKEN:** 14	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 1	**TUTORIALS:** 1	**QP DISCUSSION:**
	QUIZ: –	**SEMINARS:**	**ANY OTHER:**

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT -FEB 2022) MACROSCHEDULE

SUBJECT	Cryptography	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS744	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Explain the concepts of Cyber security
- Illustrate key management issues and solutions.
- Familiarize with Cryptography and very essential algorithms
- Introduce cyber Law and ethics to be followed.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	05.10.2021 to 23.10.2021	**Module- 1:Introduction** Cyber Attacks, Defence Strategies and Techniques, Guiding Principles, Mathematical Background for Cryptography - Modulo Arithmetic's, The Greatest Comma Divisor, Useful Algebraic Structures, Chinese Remainder Theorem, Basics of Cryptography - Preliminaries, Elementary Substitution Ciphers, Elementary Transport Ciphers, Other Cipher Properties, Secret Key Cryptography – Product Ciphers, DES Construction. **No. of Contact Sessions: 10**	**https://www.edureka.co/cybersecurity** **https://www.youtube.com/draeger.com/cybersecurity** https://www.youtube.com/watch?v=hr5uRUAsf91Mh ttps://www.youtube.com/watch?v=bZBVhvNjsKY https://www.youtube.com/watch?v=Y61qn_SQI40
2	26.10.2021 to 11.11.2021	**Module -2Public Key Cryptography and RSA** RSA Operations, Why Does RSA Work?, Performance, Applications, Practical Issues, Public Key Cryptography Standard(PKCS), Cryptographic Hash - Introduction, Properties, Construction, Applications and Performance, The Birthday Attack, Discrete Logarithm and its Applications - Introduction, Diffie-Hellman Key Exchange, Other Applications. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=rIJTMUBXbKE https://www.youtube.com/watch?v=1Ngm_saI9t https://www.youtube.com/watch?v=jNoUbK8hvI https://www.youtube.com/watch?v=zLKT4-uRGw4
3	12.11.2021 to 02.12.2021	**Module -3:Key Management** Introduction, Digital Certificates, Public Key Infrastructure, Identity–based Encryption, Authentication-I - One way Authentication, Mutual Authentication, Dictionary Attacks, Authentication – II – Centalised Authentication, The Needham-Schroeder Protocol,	https://www.youtube.com/watch?v=JAgaWJrvKyg https://www.youtube.com/watch?v=V7jbsCcIsIG

		Kerberos, Biometrics, IPSec- Security at the Network Layer – Security at Different layers: Pros and Cons, IPSec in Action, Internet Key Exchange (IKE) Protocol, Security Policy and IPSEC, Virtual Private Networks, Security at the Transport Layer - Introduction, SSL Handshake Protocol, SSL Record Layer Protocol, OpenSSL. **No. of Contact Sessions: 10**	I https://www.youtube.com/watch?v=IL7OvI5oltU
4	**04.12.2021 to 21.12.2021**	**Module -4 :**IEEE 802.11 Wireless LAN Security Background, Authentication, Confidentiality and Integrity, Viruses, Worms, and Other Malware, Firewalls – Basics, Practical Issues, Intrusion Prevention and Detection - Introduction, Prevention Versus Detection, Types of Instruction Detection Systems, DDoS Attacks Prevention/Detection, Web Service Security – Motivation, Technologies for Web Services, WS- Security, SAML, Other Standards. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=hRsv-a_3IWw https://www.youtube.com/watch?v=PTJ6UZr1pPQ https://www.youtube.com/watch?v=_3fB4gn-gL8
5	**01.01.2022 to 25.01.2022**	**Module -5 :IT act aim and objectives** Scope of the act, Major Concepts, Important provisions, Attribution, acknowledgement, and dispatch of electronic records, Secure electronic records and secure digital signatures, Regulation of certifying authorities: Appointment of Controller and Other officers, Digital Signature certificates, Duties of Subscribers, Penalties and adjudication, The cyber regulations appellate tribunal, Offences, Network service providers not to be liable in certain cases, Miscellaneous Provisions. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=9wf1GYvL-Rc https://www.youtube.com/watch?v=_gvilcmnw-g

TEXT BOOKS:

1. Cryptography, Network Security and Cyber Laws – Bernard Menezes, Cengage Learning, 2010 edition (Chapters-1,3,4,5,6,7,8,9,10,11,12,13,14,15,19(19.1- 19.5),21(21.1-21.2),22(22.1-22.4),25

REFERENCE BOOKS:

1. Cryptography and Network Security- Behrouz A Forouzan, Debdeep Mukhopadhyay, Mc-GrawHill, 3rd Edition, 2015
2. Cryptography and Network Security- William Stallings, Pearson Education, 7thEdition
3. Cyber Law simplified- Vivek Sood, Mc-GrawHill, 11th reprint , 2013
4. Cyber security and Cyber Laws, Alfred Basta, Nadine Basta, Mary brown, ravindrakumar, Cengage learning

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT -FEB 2022) MICROSCHEDULE

SUBJECT	Cryptography	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS744	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	Cyber Attacks ,Defence Strategies and Techniques	Covered	
2	01/10/21	WED	Guiding Principles.	"	
3	08/10/21	THU	Mathematical Background for Cryptography - Modulo Arithmetic's	"	
4	09/10/21	FRI	The Greatest Comma Divisor	"	
5	12/10/21	SAT	Useful Algebraic Structures	"	
6	13/10/21	TUE	Chinese Remainder Theorem	"	
7	16/10/21	THU	Basics of Cryptography - Preliminaries	"	
8	19/10/21	FRI	Elementary Substitution Ciphers	"	
9	21/10/21	MON	Elementary Transport Ciphers, Other Cipher Properties	"	
0	23/10/21	TUE	Secret Key Cryptography – Product Ciphers, DES Construction	"	

SUMMARY

PLANNED DATE	FROM: 5.10.2021	TO: 23.10.2021	
ACTUAL CLASSES TAKEN	FROM: 5/10/21	TO: 23/10/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	26/10/21	FRI	RSA Operations	Covered	
12	27/10/21	THU	Why Does RSA Work? Performance, Applications	-11-	
13	28/10/21	MON	Practical Issues	-11-	
14	29/10/21	TUE	Public Key Cryptography Standard (PKCS)	-11-	
15	02/11/21	THU	Cryptographic Hash - Introduction, Properties	-11-	
16	04/11/21	FRI	Construction, Applications and Performance	-11-	
17	06/11/21	MON	The Birthday Attack	-11-	
18	09/11/21	TUE	Discrete Logarithm and its Applications Introduction	Covered	
19	10/11/21	THU	Diffie-Hellman Key Exchange	Covered	
20	11/11/21	FRI	Other Applications.	Covered	

SUMMARY

PLANNED DATE	FROM: 26.10.2021	TO: 11.11.2021	
ACTUAL CLASSES TAKEN	FROM: 26/10/21	TO: 11/11/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	12/11/21	MON	Introduction, Digital Certificates	Covered	
22	13/11/21	TUE	Public Key Infrastructure, Identity-based Encryption	Covered	
23	16/11/21	THU	Authentication-I - One way Authentication	Covered	
24	17/11/21	TUE	Mutual Authentication, Dictionary Attacks	Covered	
25	24/11/21	THU	Authentication – II – Centalised Authentication	Covered	
26	25/11/21	FRI	The Needham-Schroeder Protocol, Kerberos, Biometrics	Covered	
27	27/11/21	MON	IPSec- Security at the Network Layer – Security at Different layers: Pros and Cons	Covered	
28	30/11/21	TUE	IPSec in Action, Internet Key Exchange (IKE) Protocol, Security Policy and IPSEC.	Covered	
29	01/12/21	THU	Virtual Private Networks, Security at the Transport Layer - Introduction,	Covered	
30	02/12/21	FRI	SSL Handshake Protocol, SSL Record Layer Protocol, OpenSSL	Covered	

SUMMARY

PLANNED DATE	FROM: 12.11.2021	TO:02.12.2021	
ACTUAL CLASSES TAKEN	FROM: 12/11/21	TO: 2/12/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	04/12/21	MON	IEEE 802.11 Wireless LAN Security - Background, Authentication	Covered	
32	07/12/21	TUE	Confidentiality and Integrity, Viruses, Worms, and Other Malware	Covered	
33	08/12/21	THU	Firewalls – Basics	Covered	
34	09/12/21	THU	Practical Issues, Intrusion Prevention and Detection - Introduction	Covered	
35	10/12/21	THU	Prevention Versus Detection	Covered	
36	11/12/21	FRI	Types of Instruction Detection Systems	Covered	
37	16/12/21	MON	DDoS Attacks Prevention/Detection	Covered	
38	17/12/21	TUE	Web Service Security – Motivation	Covered	
39	18/12/21	THU	Technologies for Web Services	Covered	
40	21/12/21	TUE	WS- Security, SAML, Other Standards.	Covered	

SUMMARY

PLANNED DATE	FROM: 04.12.2021	TO: 21.12.2021	
ACTUAL CLASSES TAKEN	FROM: 4/12/21	TO: 21/12/21	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	01/01/22	THU	IT act aim and objectives	Covered	
42	04/01/22	MON	Scope of the act, Major Concepts	Covered	
43	05/01/22	TUE	Important provisions, Attribution, acknowledgement, and dispatch of electronic records	Covered	
44	07/01/22	THU	Secure electronic records and secure digital signatures	Covered	
45	08/01/22	FRI	Regulation of certifying authorities: Appointment of Controller and Other officers	Covered	
46	11/01/22	MON	Digital Signature certificates, Duties of Subscribers	Covered	
47	12/01/22	TUE	Penalties and adjudication	Covered	
48	13/01/22	THU	The cyber regulations appellate tribunal	Covered	
49	15/01/22	FRI	Offences, Network service providers not to be liable in certain cases,	Covered	
50	18/01/22	MON	Miscellaneous Provisions.	Covered	
51	19/01/22	TUE	Question paper discussion	Covered	
52	25/01/22	WED	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 01.01.2022	TO: 25.01.2022	
ACTUAL CLASSES TAKEN	FROM: 1/1/22	TO: 25/1/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -JAN 2022) MACRO SCHEDULE

SUBJECT	USER INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS734	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Design the User Interface, design, menu creation ,windows creation and connection between menus and windows.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	05.10.2021 to 26.10.2021	**Module –1** The User Interface-Introduction, Overview, The importance of user interface –Defining the user interface. The importance of Good design, Characteristics of graphical and web user interfaces, Principles of user interface design. **No. of Contact Sessions: 10**	Introduction to User Interface Design - User Interface (UI) Design - Startup Guide By Nayan Bheda - YouTube
2	27.10.2021 To 13.11.2021	**Module –2** The User Interface Design process- Obstacles, Usability, Human characteristics in Design, Human Interaction speeds, Business functions-Business definition and requirement analysis, Basic business functions, Design standards. **No. of Contact Sessions: 10**	user interface design	software engineering	- YouTube User Interface Design - Basic Concepts, Types of User Interface - YouTube
3	16.11.2021 to 07.12.2021	**Module –3** System menus and navigation schemes- Structures of menus, Functions of menus, Contents of menus, Formatting of menus, Phrasing the menu, Selecting menu choices, Navigating menus, Kinds of graphical menus. **No. of Contact Sessions: 10**	Structures of menus	functions of menus	User Interface Design (18CS832) - YouTube
4	08.12.2021 To 23.12.2021	**Module–4** Windows - Characteristics, Components of window, Window presentation styles, Types of window, Window management, Organizing window functions,Window operations, Web systems, Characteristics of device based controls. **No. of Contact Sessions: 10**	Human characteristics in UI design| User interface design (18CS832) 8th sem CSE|VTU - YouTube

5	30.12.2021 to 15.01.2022	**Module–5** Screen based controls- Operable control, Text control, Selection control, Custom control, Presentation control, Windows Tests-prototypes, kinds of tests. **No. of Contact Sessions: 10**	Lecture 36 Scroll Based Controls Part 1 Button - YouTube

Textbooks:

Wilbert O. Galitz, "The Essential Guide to User Interface Design", John Wiley & Sons, Second Edition 2002.

Reference Books:

1. Ben Sheiderman, "Design the User Interface", Pearson Education, 1998.
2. Alan Cooper, "The Essential of User Interface Design", Wiley- Dream Tech Ltd.,2002

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2021 -JAN 2022) MICRO SCHEDULE

SUBJECT	USER INTERFACE DESIGN	STAFF NAME	BASAVESHA D
SUBJECT CODE	18CS734	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	05/10/21	TUE	The User Interface-Introduction	Covered	
2	07/10/21	THU	Overview, The importance of user interface	Covered	
3	09/10/21	SAT	Overview, The importance of user interface cont...	Covered	
4	12/10/21	TUE	Defining the user interface	Covered	
5	13/10/21	WED	The importance of Good design	Covered	
6	16/10/21	SAT	The importance of Good design	Covered	
7	19/10/21	TUE	Characteristics of graphical and web user interfaces	Covered	
8	21/10/21	THU	Characteristics of graphical and web user interfaces cont...	Covered	
9	23/10/21	SAT	Principles of user interface design	Covered	
10	26/10/21	TUE	Principles of user interface design	Covered	

SUMMARY

PLANNED DATE	FROM: 05.10.2021	TO: 26.10.2021	
ACTUAL CLASSES TAKEN	FROM: 05.10.2021	TO: 26.10.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
SL. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	27/10/21	WED	The User Interface Design process- Obstacles	covered	
12	28/10/21	THU	Usability	covered	
13	30/10/21	SAT	Human characteristics in Design	covered	
14	02/11/21	TUE	Human Interaction speeds	Covered	
15	04/11/21	THU	Business functions-Business definition and requirement analysis	covered	
16	06/11/21	SAT	Business functions-Business definition and requirement analysis cont....	covered	
17	09/11/21	TUE	Basic business functions	covered	
18	10/11/21	WED	Basic business functions cont....	covered	
19	11/11/21	THU	Design standards.	covered	
20	13/11/21	SAT	Design standards cont.....	covered	

SUMMARY

PLANNED DATE	FROM: 27.10.2021	TO: 13.11.2021	
ACTUAL CLASSES TAKEN	FROM: 27.10.2021	TO: 13.11.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	16/11/21	TUE	System menus and navigation schemes-. . . . . Kinds of graphical menus.	Covered	
22	17/11/21	WED	Structures of menus	Covered	
23	23/11/21	TUE	Functions of menus	Covered	
24	24/11/21	WED	Contents of menus	Covered	
25	25/11/21	THU	Formatting of menus	covered	
26	27/11/21	SAT	Phrasing the menu	covered	
27	01/12/21	WED	Selecting menu choices	covered	
28	02/12/21	THU	Navigating menus	Covered	
29	04/12/21	SAT	Kinds of graphical menus.	covered	
30	07/12/21	TUE	Kinds of graphical menus cont….	Covered	

SUMMARY

PLANNED DATE	FROM: 16.11.2021	TO:07.12.2021	
ACTUAL CLASSES TAKEN	FROM: 16.11.2021	TO: 07.12.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	08/12/21	WED	Windows - Characteristics	Covered	
32	09/12/21	THU	Components of window	Covered	
33	11/12/21	SAT	Window presentation styles	Covered	
34	14/12/21	TUE	Types of window	Covered	
35	15/12/21	WED	Window management	Covered	
36	16/12/21	THU	Organizing window functions	Covered	
37	18/12/21	SAT	Window operations	Covered	
38	21/12/21	TUE	Web systems	Covered	
39	22/12/21	WED	Characteristics of device based controls	Covered	
40	23/12/21	THU	Characteristics of device based controls cont...	Covered	

SUMMARY

PLANNED DATE	FROM:08.12.2021	TO: 23.12.2021	
ACTUAL CLASSES TAKEN	FROM: 08.12.2021	TO: 23.12.2021	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	30/12/21	THU	Screen based controls- Operable control	Covered	
42	01/01/22	SAT	Screen based controls- Operable control cont...	Covered	
43	04/01/22	TUE	Text control	Covered	
44	05/01/22	WED	Selection control	Covered	
45	06/01/22	THU	Custom control	Covered	
46	08/01/22	SAT	Presentation control	Covered	
47	11/01/22	TUE	Presentation control cont....	Covered	
48	12/01/22	WED	Windows Tests-prototypes	Covered	
49	13/01/22	THU	kinds of tests	Covered	
50	15/01/22	SAT	kinds of tests cont.....	Covered	
51-56	18/01/22 To 31/01/2022	Revision		Covered	

SUMMARY

PLANNED DATE	FROM: 30.12.2021	TO: 15.01.2022	
ACTUAL CLASSES TAKEN	FROM: 30.12.2021	TO: 15.01.2022	
NUMBER OF CLASSES	ALLOCATED: 16	TAKEN: 16	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL -JUNE 2022) MACROSCHEDULE

SUBJECT	INTERNET OF THINGS TECHNOLOGY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	18CS81/17CS81/15CS81	SEM/SEC	VIII
IA Marks (CIE)	40/20 (Average of three tests for 30/15 marks and 10/05 marks for assignment)	Maximum Exam Marks (SEE)	60/30 (Question paper will be set and evaluated for 60/30 marks)

Course Outcomes or COs

CO1: Interpret the impact and challenges posed by IoT networks leading to new architectural models.
CO2: Compare and contrast the deployment of smart objects and the technologies to connect themto network.
CO3: Appraise the role of IoT protocols for efficient network communication.

CO4:Elaborate the need for Data Analytics and Security in IoT.

CO5: Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	18.04.2022 to 29.04.2022	**Module- 1** **Introduction on IoT,** What is IoT, Genesis of IoT, IoT and Digitization, IoT Impact, Convergence of IT and IoT, IoT Challenges, IoT Network Architecture and Design, Drivers Behind NewNetwork Architectures, Comparing IoTArchitectures, A Simplified IoT Architecture, The Core IoT Functional Stack, IoT Data Management and Compute Stack. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=WkVAAjxwqIU&list=PLeo1Jgx99XNfJe5gNbvsj8t43jzofAvi https://www.youtube.com/watch?v=8XIbvXk1ES2w&list=PLeo1Jgx99XNfJe5gNbvsj8t43jzofAvi&index=3 https://www.youtube.com/watch?v=AMjLJdwLM&list=PLeo1Jgx99XNfJe5gNbvsj8t43jzofAvi&index=5 https://www.youtube.com/watch?v=AMjLJdwLM&list=PLeo1Jgx99XNfJe5gNbvsj8t43jzofAvi&index=6

2.	30.04.2022 to 13.05.2022	**Module -2** Smart Objects: The "Things" in IoT, Sensors, Actuators, and Smart Objects, Sensor Networks, Connecting Smart Objects, Communications Criteria, IoT Access Technologies. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=LE6-DeSkBbI https://www.youtube.com/watch?v=5N0YSWSbGA8 https://www.youtube.com/watch?v=Cn3xIm0D8Sw https://www.youtube.com/watch?v=BKzmf0mFEUo&list=PLeo1K3hjS3uvCeTYTeyfe0-rN5r8YI_hfq&index=10
3.	14.05.2022 to 02.06.2022	**Module -3** IP as the IoT Network Layer, The Business Case for IP, The need for Optimization, Optimizing IP for IoT, Profiles and Compliances, Application Protocols for IoT, TheTransport Layer, IoT Application Transport Methods. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP2Bw6vQ8Jc https://www.youtube.com/watch?v=5wx1ICU-U4g https://www.youtube.com/watch?v=X1NvIa2Xl0 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-scale-strategies-for-communication-resources-codex2295.pdf https://books.google.co.in/books?id=xmkIr&dq=Optimizing+IP+for+IoT:+From+Connectivity+to+Value&lr=&id=Q6PI1BwAAQBJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT&ots=gUqF0vfDC8&sig=LwbCiE42kSLE-c_zvlcPBdbmQ&redir_esc=y#v=onepage&q=Application%20Protocols%20for%20IoT&f=false

4.	02.06.2022 to 11.06.2022	**Module -4** Data and Analytics for IoT, An Introduction to Data Analytics for IoT, Machine Learning, Big Data Analytics Tools and Technology, Edge Streaming Analytics,Network Analytics, Securing IoT, A Brief History of OT Security, Common Challengesin OT Security, How IT and OT Security Practices and Systems Vary, Formal RiskAnalysis Structures: OCTAVE and FAIR, The Phased Application of Security in anOperational Environment. **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=7y1d1Bs6jXk&list=PLRmd1dk1z9Q7Qmd1fSc4pdJzvOlc_s6t1cRh4 https://www.youtube.com/watch?v=X1Sa4cf8l3 https://www.youtube.com/watch?v=JB8NMYUIGbw&list=PL3nFcvBHan3bZ5ZvCYTmGfk7J9Ff5 https://www.geeksforgeeks.org/data-analytics-for-iot/
5.	16.06.2022 to 30.06.2022	**Module -5** IoT Physical Devices and Endpoints - Arduino UNO: Introduction to Arduino, Arduino UNO, Installing the Software, Fundamentals of Arduino Programming. IoTPhysical Devices and Endpoints - RaspberryPi: Introduction to RaspberryPi, About theRaspberryPi Board: Hardware Layout, Operating Systems on RaspberryPi, ConfiguringRaspberryPi, Programming RaspberryPi with Python, Wireless Temperature MonitoringSystem Using Pi, DS18B20 Temperature Sensor, Connecting Raspberry Pi via SSHLAccessing Temperature from DS18B20 sensors, Remote access to RaspberryPi, Smartand Connected Cities, An IoT Strategy for Smarter Cities, Smart City IoT Architecture, Smart City Security Architecture, Smart City Use-Case Examples **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=AvtfBWIT_Qo&list=PLeo1kcpa-9WXMf_Jn5gMvVg8R43jo1G9-&index=17 https://www.youtube.com/watch?v=1P9JEAbHVa2w&list=PLeo1kcpa-9WXMf_Jn5gMvVg8R43jo1G9-&index=18 https://www.youtube.com/watch?v=0vAGxh2Ymbs&list=PLeo1kcpa-9WXMf_Jn5gMvVg8R43jo1G9-&index=27 https://www.youtube.com/watch?v=2AKMJRnBb0A&list=PLeo1kcpa-9WXMf_Jn5gMvVg8R43jo1G9-&index=28 https://www.youtube.com/watch?v=N9w0HdZWNM8&list=PLeo1kcpa-9WXMf_Jn5gMvVg8R43jo1G9-&index=29

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (APRIL –JUNE 2022) MICROSCHEDULE

SUBJECT	INTERNET OF THINGS TECHNOLOGY	STAFF NAME	Mr. CHETHAN M S
SUBJECT CODE	18CS81/17CS81/15CS81	SEM/SEC	VIII
IA Marks (CIE)	40/20 (Average of three tests for 30/15 marks and 10/05 marks for assignment)	Maximum Exam Marks (SEE)	60/80 (Question paper will be set and evaluated for 60/80 marks)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	16/04/22	SAT	**Module 1: Introduction on IoT**, What is IoT	Covered	
2	21/04/22	THU	Genesis of IoT, IoT and Digitization	Covered	
3	21/04/22	THU	IoT Impact,	Covered	
4	22/04/22	FRI	Convergence of IT and IoT	Covered	
5	22/04/22	FRI	IoT Challenges, IoT Network Architecture and Design	Covered	
6	23/04/22	SAT	Drivers Behind New Network Architectures,	Covered	
7	28/04/22	THU	Comparing IoT Architectures,	Covered	
8	28/04/22	THU	A Simplified IoT Architecture	Covered	
9	29/04/22	FRI	The Core IoT Functional Stack,	Covered	
10	29/04/22	FRI	IoT Data Management and Compute Stack	Covered	

SUMMARY

PLANNED DATE	FROM: 16.04.2022	TO:29.04.2022	
ACTUAL CLASSES TAKEN	FROM: 16/4/22	TO: 29/4/22	
NUMBER OF CLASSES	ALLOCATED:10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: YES	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukeswara
HOD / CSE

Dr. Naren
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	30/04/22	SAT	**Module 2:** Smart Objects ,The "Things" in IoT.	Covered	
12	04/05/22	THU	Sensors.	Covered	
13	04/05/22	THU	Actuators.	Covered	
14	05/05/22	FRI	Smart Objects.	Covered	
15	05/05/22	FRI	Sensor Networks.	Covered	
16	06/05/22	SAT	Connecting Smart Objects.	Covered	
17	12/05/22	THU	Communications Criteria.	Covered	
18	12/05/22	THU	Communications Criteria Contd....	Covered	
19	13/05/22	FRI	IoT Access Technologies	Covered	
20	13/05/22	FRI	IoT Access Technologies contd.....	Covered	

SUMMARY

PLANNED DATE	FROM: 30.04.2022	TO: 13.05.2022	
ACTUAL CLASSES TAKEN	FROM: 30/4/22	TO: 13/5/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: Yes	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER: Worksheet

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukhaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
BHEEMA INSTITUTE OF ENGINEERING & TECHNOLOGY
[illegible] - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	14/05/22	SAT	**Module 3:** IP as the IoT Network Layer.	Covered	
22	19/05/22	THU	The Business Case for IP.	Covered	
23	19/05/22	THU	The need for optimization	Covered	
24	21/05/22	SAT	Optimizing IP for IoT.	Covered	
25	26/05/22	THU	Profiles and Compliances.	Covered	
26	26/05/22	THU	Application Protocols for IoT.	Covered	
27	27/05/22	FRI	Application Protocols for IoTcontd	Covered	
28	27/05/22	FRI	The Transport Layer.	Covered	
29	28/05/22	SAT	IoT Application Transport Methods.	Covered	
30	02/06/22	THU	IoT Application Transport Methods contd...	Covered	

SUMMARY

PLANNED DATE	FROM: 14.05.2022	TO:02.06.2022	
ACTUAL CLASSES TAKEN	FROM: 14/5/22	TO: 02/6/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER: Lab work

Mr. Chethan M S
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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TUMKUR - 572 106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	02/06/22	THU	**Module 4:** Data and Analytics for IoT	Covered	
32	03/06/22	FRI	An Introduction to Data Analytics for IoT.	Covered	
33	03/06/22	FRI	Machine Learning.	Covered	
34	04/06/22	SAT	Big Data Analytics Tools and Technology	Covered	
35	09/06/22	THU	Edge Streaming Analytics, Network Analytics.	Covered	
36	09/06/22	THU	Securing IoT. A Brief History of OT Security.	Covered	
37	10/06/22	FRI	Common Challenges in OT Security, How IT and OT Security Practices and Systems Vary	Covered	
38	10/06/22	FRI	Formal Risk Analysis Structures: OCTAVE and FAIR	Covered	
39	11/06/22	SAT	The Phased Application of Security in an Operational Environment	Covered	

SUMMARY

PLANNED DATE	FROM: 02.06.2022	TO: 11.06.2022	
ACTUAL CLASSES TAKEN	FROM: 02/6/22	TO: 11/6/22	
NUMBER OF CLASSES	ALLOCATED: 09	TAKEN: 09	
CONTENT COVERED FOR IA	IA 1:	IA 2: YES	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION: YES
	QUIZ:	SEMINARS:	ANY OTHER: Lab work

Mr. Chethan M S
Staff Incharge

Prof. C. V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
40	16/06/22	THU	**Module 5:** IoT Physical Devices and Endpoints – Arduino UNO:	Covered	
41	16/06/22	THU	Introduction to Arduino, Arduino UNO.	Covered	
42	23/06/22	THU	Installing the Software, Fundamentals of Arduino Programming.	Covered	
43	23/06/22	THU	IoT Physical Devices and Endpoints – Raspberry Pi: Introduction to Raspberry Pi.	Covered	
44	24/06/22	FRI	About the Raspberry Pi Board: Hardware Layout.	Covered	
45	24/06/22	FRI	Operating Systems on Raspberry Pi, Configuring RaspberryPi.	Covered	
46	25/06/22	SAT	Programming Raspberry Pi with Python.	Covered	Extra
47	25/06/22	SAT	Wireless Temperature Monitoring System Using Pi, DS18B21 Temperature Sensor.	Covered	Extra
48	25/06/22	SAT	Connecting Raspberry Pi via SSH, Accessing Temperature from DS18B21 sensors	Covered	
49	30/06/22	THU	Remote access to RaspberryPi, Smart and Connected Cities.	Covered	
50	30/06/22	THU	An IoT Strategy for Smarter Cities, Smart City IoT Architecture, Smart City Security Architecture, Smart City Use-Case Examples.	Covered	

SUMMARY

PLANNED DATE	FROM: 16.06.2022	TO: 30.06.2022	
ACTUAL CLASSES TAKEN	FROM: 16/6/22	TO: 30/6/22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: YES
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: YES	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER: Lab work

Mr. Chethan M S
Staff Incharge

Prof. G.C. Shanmukeswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
Tumkur - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEPTMBER 2022 - DECEMBER 2023) MICRO SCHEDULE

ODD 22-23

SUBJECT	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	STAFF NAME	Mrs. Ayisha Khanum
SUBJECT CODE	18CS71	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

MODULE I

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	26/09/22	MON	What is artificial intelligence?	Covered	
2	29/09/22	THU	The AI problems,the underlying assumption.	Covered	
3	30/09/22	FRI	Problems, problem spaces,Defining the problem as a State space search,production systems,problem characteristics,	Covered	
4	01/10/22	SAT	Problems, problem spaces and search.	Covered	
5	03/10/22	MON	Issues in the Design of search programs	Covered	
6	06/10/22	THU	Additional problems.	Covered	
7	07/10/22	FRI	Heuristic search techniques,generate and test, hill Climbing.	Covered	
8	08/10/22	SAT	Hill Climbing, Best-First Search,problem Reduction	Covered	
9	10/10/22	MON	Constraint Satisfaction	Covered	
10	10/10/22		Means Ends Analysis	Covered	

SUMMARY

PLANNED DATE	FROM: 26.09.22	TO: 10.10.2022	
ACTUAL CLASSES TAKEN	FROM: 26/9/22	TO: 10/10/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 3	QP DISCUSSION: 1
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Ayisha Khanum
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	13/10/22	FRI	Knowledge representation issues, Representation and Mappings.	Covered	
14	14/10/22	SAT	Predicate logic.	Covered	
15	15/10/22	MON	Representaiton knowledge using rules.	Covered	
16	17/10/22	THU	Concpet Learning.	Covered	
17	20/10/22	FRI	Concept learning task.	Covered	
18	21/10/22	SAT	Concpet learning as search.	Covered	
19	22/10/22	MON	Find-S algorithm.	Covered	
20	31/10/22	THU	Candidate Elimination Algorithm.	Covered	
21	03/11/22	FRI	Inductive bias of Candidate Elimination Algorithm.	Covered	
22	04/11/22	SAT	Inductive bias of Candidate Elimination Algorithm.	Covered	

SUMMARY

PLANNED DATE	FROM: 13.10.2022	TO: 04.11.2022	
ACTUAL CLASSES TAKEN	FROM: 13-10-2022	TO: 04-11-2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 2	TUTORIALS:	QP DISCUSSION: 2
	QUIZ:	SEMINARS: 1	ANY OTHER:

Mrs. Ayisha Khanum
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	05/11/22	MON	Decision Tree Learning.	Covered	
26	05/11/22	THU	Introduction.	Covered	
27	07/11/22	FRI	Decision tree representation.	Covered	
28	10/11/22	SAT	Appropriate problems.	Covered	
29	11/11/22	MON	ID3 algorithm	Covered	
30	12/11/22	THU	Artificil Nueral Network.	Covered	
31	14/11/22	FRI	Introduction, NN representation.	Covered	
32	17/11/22	SAT	Appropriate problems.	Covered	
33	18/11/22	THU	Perceptrons.	Covered	
34	19/11/22	FRI	Backpropagation algorithm.	Covered	

SUMMARY

PLANNED DATE	FROM: 05.11.2022	TO: 19.11.2022	
ACTUAL CLASSES TAKEN	FROM: 5/11/22	TO: 19/11/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Ayisha Khanum
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SIDDAGANGA INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572 103

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	21/11/22	MON	Bayesian Learning.	Covered	
38	23/11/22	WED	Introduction.	Covered	
39	23/11/22	WED	Bayes theorem.	Covered	
40	24/11/22	THU	Bayes theorem and concept learning.	Covered	
41	25/11/22	FRI	ML and LS error hypothesis.	Covered	
42	26/11/22	SAT	ML for predicting.	Covered	
43	28/11/22	WED	MDL principle, Bates optimal classifier.	Covered	
44	30/11/22	WED	Gibbs algorithm.	Covered	
45	05/12/22	MON	Navie Bayes classifier.	Covered	
46	07/12/22	WED	BBN, EM Algorithm.	Covered	

SUMMARY

PLANNED DATE	FROM: 21.11.2022	TO: 07.12.2022	
ACTUAL CLASSES TAKEN	FROM: 21/11/22	TO: 7/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 3	TUTORIALS:	QP DISCUSSION: 3
	QUIZ:	SEMINARS: 2	ANY OTHER:

Mrs. Ayisha Khanum
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHREEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	08/12/22	THU	Instance-Base Learning	Covered	
49	09/12/22	FRI	Introduction.	Covered	
50	10/12/22	SAT	k-Nearest Neighbour Learning.	Covered	
51	12/12/22	MON	Locally weighted regression.	Covered	
52	14/12/22	WED	Radial basis function	Covered	
53	15/12/22	THU	Case-Based reasoning	Covered	
54	16/12/22	FRI	Reinforcement Learning	Covered	
55	16/12/22	FRI	Introduction	Covered	
56	17/12/22	SAT	The learning task	Covered	
57	17/12/22	SAT	Q-Learning.	Covered	

SUMMARY

PLANNED DATE	FROM: 08.12.2022	TO:17.12.2022	
ACTUAL CLASSES TAKEN	FROM: 8/12/22	TO: 17/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 5	TUTORIALS: 4	QP DISCUSSION: 5
	QUIZ:	SEMINARS: 4	ANY OTHER:

Mrs. Ayesha Khanum
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHREE INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LESSON PLAN (SEPTEMBER 2022 – DECEMBER 2022) MACRO SCHEDULE

DDD - 2223

SUBJECT	**ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**	**STAFF NAME**	**Mrs. Ayisha Khanum**
SUBJECT CODE	**18CS71**	**SEM/SEC**	**VII/A**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment.)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)**

Course Outcomes or COs

At the end of the course the student will be able to

- Appraise the theory of Artificial intelligence and Machine Learning.
- Illustrate the working of AI and ML Algorithms.
- Demonstrate the applications of AI and ML.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	26/9/2022 to 10.10.2022	**Module- 1** What is artificial intelligence? The AI problems,the underlying assumption. Problems, problem spaces,Defining the problem as State space search,production systems,problem cha Problems, problem spaces and search. Issues in the Design of search programs Additional problems. Heuristic search techniques,generate and test, hill Hill Climbing, Best-First Search,problem Reducti Constraint Satisfaction Means Ends Analysis **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=WUVAtnwjE4&list=PLeva2gn-9WXMf_In5pMvvj89-Ojnofd-i https://www.youtube.com/watch?v=8NDsVkIEVJc&list=PLeva2gn-9WXMf_In5pMvvj89-Ojnofd-i&index=2 https://www.youtube.com/watch?v=-VMfL1fwEM&list=PLeva2gn-9WXMf_In5pMvvj89-Ojnofd-i&index=9 https://www.youtube.com/watch?v=-VMfL1fwEM&list=PLeva2gn-9WXMf_In5pMvvj89-Ojnofd-i&index=9

2.	13/10/22 to 4/11/2022	**Module -2** Knowledge representation issues,Representation as Predicate logic. Representaion knowledge using rules. Concpet Learning. Concept learning task. Concpet learning as search. Find-S algorithm. Candidate Elimination Algorithm. Inductive bias of Candidate Elimination Algorithm Inductive bias of Candidate Elimination Algorithm **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aBYEZ7vIEgA&list=PLzvuIgxxfW8MI_InSpMvzi5B43joaSAI4&index=3 https://www.youtube.com/watch?v=8BdBX8868EA&list=PLzvuIgxxfW8MI_InSpMvzi5B43joaSAI4&index=4 https://www.youtube.com/watch?v=BKGnbeJmOM4&list=PLzvuIgxxfW8MI_InSpMvzi5B43joaSAI4&index=10 https://www.youtube.com/watch?v=BXdbc4HwLuk&list=PLzvuIgxxfW8MI_InSpMvzi5B43joaSAI4&index=11
3.	05/11/2022 to 19/11/2022	**Module -3** Decision Tree Learning Introduction Decision tree representation. Appropriate problems ID3 algorithm Aritificil Nueral Network. Introduction, NN representation. Appropriate problems. Perceptrons. Backpropagation algorithm. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP346yoaOQk https://www.youtube.com/watch?v=SwyLCE-U44g https://www.youtube.com/watch?v=X1iNzla2120 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+nps6&ots=g1qfsh1DC8&sig=L4rbC1f423S1_E-z_gvuZ9Ji0o&redir_esc=y#v=onepage&q&f=false

4.	21/11/2022 to 07/12/2022	**Module -4** Bayesian Learning. Introduction. Bayes theorem. Bayes theorem and concept learning. ML and LS error hypothesis. ML for predicting. MDL principle, Bates optimal classifier. Gibbs algorithm. Navie Bayes classifier. BBN, EM Algorithm. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=La-NZ6QDb6Q&list=PLBw09JeK0S7MmOBnkQvvQn_tFvIuJGzI https://www.youtube.com/watch?v=XZBa4GBIY https://www.youtube.com/watch?v=BBMSTIJC6n8&list=PLbrG4Hbm3Qa42wDCDmOnIuK2I9J0Y https://www.slaconcom.com/article/classification.asp?a=2003867&sno=0
5.	8/12/2022 to 17/12/2022	**Module -5** Instance-Base Learning Introduction. k-Nearest Neighbour Learning. Locally weighted regression. Radial basis function Case-Based reasoning Reinforcement Learning Introduction The learning task Q-Learning. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Am95WIT_Qvs&list=PLzvu2gm-9WXMf_In5pMvxj943jnoI4-i&index=17 https://www.youtube.com/watch?v=H9QEAn3Uc2w&list=PLzvu2gm-9WXMf_In5pMvxj943jnoI4-i&index=18 https://www.youtube.com/watch?v=fByKuk2Ym1c&list=PLzvu2gm-9WXMf_In5pMvxj943jnoI4-i&index=23 https://www.youtube.com/watch?v=s2AKMEBnI0Q&list=PLzvu2gm-9WXMf_In5pMvxj943jnoI4-i&index=28

Mrs. Ayisha Khanum
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2022) MICROSCHEDULE

ODD 22-23

SUBJECT	Computer Networks and Security	STAFF NAME	AYISHA KHANUM
SUBJECT CODE	18CS52	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	17/10/22	MON	Principles of Network Applications	Covered	
2	17/10/22	MON	Network Application Architectures	Covered	
3	18/10/22	TUE	Processes Communicating	Covered	
4	19/10/22	WED	Transport Services Available to Applications	Covered	
5	19/10/22	WED	Transport Services Provided by the Internet	Covered	
6	21/10/22	FRI	Application-Layer Protocols, The Web and HTTP: Overview of HTTP, Non-persistent and Persistent Connections.	Covered	
7	28/10/22	FRI	HTTP Message Format, User-Server Interaction: Cookies, Web Caching, The Conditional GET, File Transfer: FTP	Covered	
8	2/11/22	WED	Commands & Replies, Electronic Mail in the Internet: SMTP, Comparison with HTTP, Mail Message Format, Mail Access Protocols, DNS, The Internet's Directory Service: Services Provided by DNS, Overview of How DNS Works, DNS Records and Messages, Peer-to-Peer Applications: P2P File Distribution, Distributed Hash Tables, Socket	Covered	
9	3/11/22	THU	Programming: creating Network Applications: Socket Programming with UDP, Socket Programming with TCP.	Covered	
10	4/11/22	FRI		Covered	

SUMMARY

PLANNED DATE	FROM: 17/10/22	TO: 4/11/22	
ACTUAL CLASSES TAKEN	FROM: 17/10/22	TO: 4/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR	IA 1: ✓	IA 2:	IA 3:

IA			
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION: 1
	QUIZ:	SEMINARS:	ANY OTHER:

Ayisha Humam
Staff Incharge

Dr Bhavishaf D
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHIVDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	7/11/22	MON	Introduction and Transport, Layer Services: Relationship Between Transport and Network Layers,	Covered	
12	8/11/22	TUE	Overview of the Transport Layer in the Internet, Multiplexing and Demultiplexing	Covered	
13	15/11/22	TUE	Connectionless Transport: UDP, UDP Segment Structure, UDP Checksum, Principles of Reliable	Covered	
14	19/11/22	SAT	Data Transfer: Building a Reliable Data Transfer Protocol, Pipelined Reliable Data Transfer Protocols	Covered	
15	21/11/22	MON	Go-Back-N, Selective repeat, Connection-Oriented Transport: TCP	Covered	
16	22/11/22	TUE	The TCP Connection, TCP Segment Structure, RoundTrip Time Estimation and Timeout, Reliable Data Transfer	Covered	
17	25/11/22	FRI	Flow Control, TCP Connection Management, Principles of Congestion Control	Covered	
18	28/11/22	MON	The Causes and the Costs of Congestion, Approaches to Congestion Control,	Covered	
19	29/11/22	TUE	, Network-assisted congestion-control example: ATM ABR Congestion control,	Covered	
20	3/12/22	SAT	TCP Congestion Control: Fairness.	Covered	

SUMMARY

PLANNED DATE	FROM: 7/11/22	TO: 3/12/22	
ACTUAL CLASSES TAKEN	FROM: [illegible]	TO: [illegible]	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 2	TUTORIALS:	QP DISCUSSION: 2
	QUIZ:	SEMINARS:	ANY OTHER:

Ayisha Ghanun
Staff Incharge

Dr Basvesha D
HOD,CSE

Dr. Narendra Viswanath
Principal

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TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	5/12/22	MON	What's Inside a Router?: Input Processing, Switching, Output Processin	Covered	
22	6/12/22	MON	Where Does Queuing Occur? Routing control plane	Covered	
23	9/12/22	FRI	IPv6,A Brief foray into IP Security, Routing Algorithms	Covered	
24	10/12/22	SAT	The Link-State (LS) Routing Algorithm	Covered	
25	12/12/22	MON	The Distance-Vector (DV) Routing Algorithm	Covered	
26	13/12/22	TUE	Hierarchical Routing	Covered	
27	14/12/22	SAT	Routing in the Internet		
28	15/12/22	THU	Intra-AS Routing in the Internet: RIP, Intra-AS Routing in the Internet		
29	20/12/22	TUE	OSPF, Inter-AS Routing: BGP		
30	21/12/22	WED	Broadcast Routing Algorithms and Multicast		

SUMMARY

PLANNED DATE	FROM: 5/12/22	TO:21/12/22	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Ayisha Khanum
Staff Incharge

Dr Bhavsha D
HOD,CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	23/12/22	FRI	Overview of Network Security :Elements of Network Security	Covered	
32	24/12/22	SAT	Classification of Network Attacks	Covered	
33	26/12/22	MON	Security Methods :Symmetric-Key Cryptography	Covered	
34	27/12/22	TUE	Data Encryption Standard (DES)	Covered	
35	30/12/22	FRI	Advanced Encryption Standard (AES)	Covered	
36	31/12/22	SAT	Public-Key Cryptography :RSA Algorithm ,Diffie-Hellman Key-Exchange Protocol	Covered	
37	2/1/23	MON	Authentication :Hash Function	Covered	
38	3/1/23	TUE	Secure Hash Algorithm (SHA)	Covered	
39	6/1/23	FRI	Digital Signatures	Covered	
40	7/1/23	SAT	Firewalls and Packet Filtering :Packet Filtering , Proxy Server ,	Covered	

SUMMARY

PLANNED DATE	FROM: 23/12/22	TO: 7/1/23	
ACTUAL CLASSES TAKEN	FROM: 23/12/22	TO: 7/1/23	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 4	TUTORIALS:	QP DISCUSSION: 3
	QUIZ: 2	SEMINARS: 1	ANY OTHER: —

Ayisha Khanum
Staff Incharge

Dr Basvesha D
HOD,CSE

Dr. Narendra Viswanath
Principal

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TUMKUR - 572106.

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	9/1/23	MON	**Multimedia Networking:** Properties of video, properties of Audio	Covered	
42	10/1/23	TUE	Types of multimedia Network Applications	Covered	
43	13/1/23	FRI	Streaming stored video: UDP Streaming	covered	
44	14/1/23	SAT	HTTP Streaming, Adaptive streaming and DASH.	Covered	
45	16/1/23	MON	content distribution Networks Voice-over-IP Limitations of the Best-Effort IP Service	covered	
46	17/1/23	TUE	Removing Jitter at the Receiver for Audio	Covered	
47	17/1/23	TUE	Recovering from Packet Loss Protocols	Covered	
48	20/1/23	FRI	Real-Time Conversational Applications	Covered	
49	21/1/23	SAT	RTP	Covered	
50	23/1/23	MON	SIP	Covered	

SUMMARY

PLANNED DATE	FROM: 9/1/23	TO: 23/1/23	
ACTUAL CLASSES TAKEN	FROM: 9/1/23	TO: 23/1/23	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 5	TUTORIALS: 4	QP DISCUSSION: 5
	QUIZ: 1	SEMINARS:	ANY OTHER:

Ayesha khanum
Staff Incharge

Dr Basvesha D
HOD,CSE

Dr. Narendra [illegible]
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (NOV- JAN 2023) MACROSCHEDULE

ODD 22-23

SUBJECT	Computer Networks and Security	STAFF NAME	Mrs Ayisha khanum
SUBJECT CODE	18CS52	SEM/SEC	V
IA Marks (IE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Explain principles of application layer protocols
- Recognize transport layer services and infer UDP and TCP protocols
- Classify routers, IP and Routing Algorithms in network layer
- Understand the Wireless and Mobile Networks covering IEEE 802.11 Standard
- Describe Multimedia Networking and Network Management

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	17/10/2022 TO 4/11/2022	**Module -1** **Application Layer:** Principles of Network Applications: Network Application Architectures, Processes Communicating, Transport Services Available to Applications, Transport Services Provided by the Internet, Application-Layer Protocols. The Web and HTTP: Overview of HTTP, Non-persistent and Persistent Connections, HTTP Message Format, User-Server Interaction: Cookies, Web Caching, The Conditional GET, File Transfer: FTP Commands & Replies, Electronic Mail in the Internet: SMTP, Comparison with HTTP, Mail Message Format, Mail Access Protocols, DNS: The Internet's Directory Service: Services Provided by DNS, Overview of How DNS Works, DNS Records and Messages, Peer-to-Peer Applications: P2P File Distribution, Distributed Hash Tables, Socket Programming: creating Network Applications: Socket Programming with UDP, Socket	https://youtu.be/zdvqn5P5GPk https://youtu.be/e9AEBd9Dh8U https://youtu.be/8pKH6jDYrOI

		Programming with TCP. **No. of Contact Sessions: 10**	
2	7/11/2022 TO 3/12/2022	**Module -2** **Transport Layer :** Introduction and Transport-Layer Services: Relationship Between Transport and Network Layers, Overview of the Transport Layer in the Internet, Multiplexing and Demultiplexing: Connectionless Transport: UDP,UDP Segment Structure, UDP Checksum, Principles of Reliable Data Transfer: Building a Reliable Data Transfer Protocol, Pipelined Reliable Data Transfer Protocols, Go-Back-N, Selective repeat, Connection-Oriented Transport TCP: The TCP Connection, TCP Segment Structure, RoundTrip Time Estimation and Timeout, Reliable Data Transfer, Flow Control, TCP Connection Management, Principles of Congestion Control: The Causes and the Costs of Congestion, Approaches to Congestion Control, Network-assisted congestion-control example, ATM ABR Congestion control, TCP Congestion Control: Fairness. **No. of Contact Sessions: 10**	https://youtu.be/5ndx5JJfPJQ https://youtu.be/e-aXPOLkPQ0 https://youtu.be/4-5x130cPQM
3	5/12/2022 TO 21/12/2022	**Module -3** **The Network layer:** What's Inside a Router?: Input Processing, Switching, Output Processing, Where Does Queuing Occur? Routing control plane, IPv6,A Brief foray into IP Security, Routing Algorithms: The Link-State (LS) Routing Algorithm, The Distance-Vector (DV) Routing Algorithm, Hierarchical Routing, Routing in the Internet: Intra-AS Routing in the Internet: RIP, Intra-AS Routing in the Internet: OSPF, Inter/AS Routing: BGP, Broadcast Routing Algorithms and Multicast. **No. of Contact Sessions: 10**	https://youtu.be/zAeSscvXRKo https://youtu.be/aUhnVk26SGc https://youtu.be/3tWFpIN4VFY https://youtu.be/cAbvi0WNIMc

4.	23/12/2022 TO 3/1/2023	**Module -4** **Network Security:** Overview of Network Security,Hemeres of Network Security , Classification of Network Attacks ,Security Methods ,Symmetric-Key Cryptography :Data Encryption Standard (DES),Advanced Encryption Standard (AES) , Public-Key Cryptography :RSA Algorithm ,Diffie-Hellman Key-Exchange Protocol , Authentication :Hash Function , Secure Hash Algorithm (SHA) , Digital Signatures , Firewalls and Packet Filtering ,Packet Filtering , Proxy Server . **No. of Contact Sessions: 10**	https://youtu.be/_8DhCrHAAnk https://youtu.be/5AW93VJUBB0 https://youtu.be/0K0H6HPSE https://youtu.be/PPxgvvw6eQ8 https://youtu.be/7vPNB0vfWw
5.	9/1/2023 TO 23/1/2023	**Module -5** **Multimedia Networking:** Properties of video, properties of Audio, Types of multimedia Network Applications, Streaming stored video: UDP Streaming, HTTP Streaming, Adaptive streaming and DASH, content distribution Networks Voice-over-IP :Limitations of the Best-Effort IP Service ,Removing Jitter at the Receiver for Audio ,Recovering from Packet Loss Protocols for Real-Time Conversational Applications , RTP , SIP **No. of Contact Sessions: 10**	https://youtu.be/R5eQKRHvJTM https://youtu.be/vGvYA4m4-ek https://youtu.be/UEUWgbGgIDs https://youtu.be/ZsKacZdVIE

Mrs Ayesha Khanum
Staff Incharge

Dr Basvesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF Comp / ISE ENGINEERING

LESSON PLAN –MICRO SCHEDULE

ODD 22-23 [IS]

SUBJECT	Project Management	STAFF NAME	Dr. Suhas G K
SUBJECT CODE	18MN752	SEM/SEC	VII 'B' sec
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1.	26-09-22	MON	Definition of project, characteristics of projects,	Covered	
2.	27-09-22	TUE	understand projects, types of projects	Covered	
3.	29-09-22	WED	scalability of project tools, project roles	Covered	
4.	30-09-22	MON	Strategic planning process, Strategic analysis,	Covered	
5.	07-10-22	TUE	strategic objectives,	Covered	
6.	08-10-22	MON	portfolio alignment – identifying potential projects,	Covered	
7.	14-10-22	WED	methods of selecting projects	Covered	
8.	15-10-22	THU	financial mode / scoring models to select projects,	Covered	
9.	20-10-22	FRI	prioritizing projects	Covered	
10.	21-10-22	MON	Securing and negotiating projects.	Covered	
11.	22-10-22	TUE	Securing and negotiating projects.	Covered	

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SUMMARY

PLANNED DATE	**FROM:** 26-09-22	**TO:** 22/10/22	
ACTUAL CLASSES TAKEN	**FROM:** 26-09-22	**TO:** 29-10-22	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 13	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 01	**TUTORIALS:**	**QP DISCUSSION:** 01
	QUIZ:	**SEMINARS:** 01	**ANY OTHER:**

Suhaga. G.K

FACULTY

Suhaga. G.K

HOD

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TUMKUR - 572106

MODULE 2					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12.	29/10/22	THU	Defining the project scope,	Covered	
13.	29/10/22	MON	Project scope checklist,	Covered	
14.	02/11/22	TUE	Project priorities, Work Breakdown Structure (WBS),	Covered	
15.	02/11/22	WED	Integrating WBS with organization	Covered	
16.	04/11/22	WED	coding the WBS for the information system	Covered	
17.	07/11/22	MON	**Scheduling Projects**: Purpose of a project schedule,	Covered	
18.	08/11/22	TUE	historical development	Covered	
19.	09/11/22	WED	how project schedules are limited and created,	Covered	
20.	10/11/22	FRI	Develop project schedules,	Covered	
21.	14/11/22	MON	uncertainty in project schedules,	Covered	
22.	15/11/22	TUE	Gantt chart.	Covered	

SUMMARY

PLANNED DATE	FROM: 25/10/22	TO: 15/11/22	
ACTUAL CLASSES TAKEN	FROM: 4-11-22	TO: 19-11-22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: ✓	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 02	TUTORIALS: 01	QP DISCUSSION: 02
	QUIZ: —	SEMINARS: 02	ANY OTHER:

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MODULE 3					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23.	16/11/22	WED	**Resourcing Projects**: Abilities needed when resourcing projects,	Covered	
24.	18/11/22	THU	estimate source needs,	Covered	
25.	19/11/22	MON	creating staffing management plant	Covered	
26.	21/11/22	TUE	project team composition issues,	Covered	
27.	23/11/22	WED	Budgeting Projects: Cost planning, cost estimating	Covered	
28.	25/11/22	THU	cost budgeting,	Covered	
29.	25/11/22	MON	Establishing cost control.	Covered	
30.	26/11/22	TUE	**Project Risk Planning**: Risk Management Planning,	Covered	
31.	26/11/22	WED	Risk identification, risk analysis	Covered	
32.	26/11/22	THU	Risk response planning,	Covered	
33.	28/11/22	MON	Project Quality Planning and Project Kickoff: Development of quality concepts,	Covered	
34.	28/11/22	TUE	project quality management plan, project quality tools,	Covered	
35.	29/11/22	WED	kickoff project, baseline and communicate project management plan	Covered	
36.	30/11/22	THU	Using Microsoft Project for project baselines.	Covered	

SUMMARY

PLANNED DATE	FROM: 16/11/22	TO: 30/11/22	
ACTUAL CLASSES TAKEN	FROM: 21-11-22	TO: 30-11-22	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: ✓	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 04	TUTORIALS: 01	QP DISCUSSION: 02
	QUIZ: —	SEMINARS: 03	ANY OTHER:

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MODULE 4					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37.	30-11-22	MON	**Performing Projects**: Project supply chain management:	Covered	
38.	05-12-22	TUE	Plan purchasing and acquisitions	Covered	
39.	05-12-22	WED	plan contracting, contact types.	Covered	
40.	06-12-22	THU	project partnering and collaborations,	Covered	
41.	08-12-22	MON	Project supply chain management.	Covered	
42.	08-12-22	TUE	**Project Progress and Results**: Project Balanced Scorecard Approach	Covered	
43.	10-12-22	WED	Internal project, customer	Covered	
44.	10-12-22	THU	financial issues, Finishing the project: Terminate project early,	Covered	
45.	12-12-22	MON	finish projects on time, secure customer feedback and approval,	Covered	
46.	12-12-22	TUE	knowledge management	Covered	
47.	13-12-22	WED	Perform administrative	Covered	
48.	14-12-22	THU	Contract closure.	Covered	

SUMMARY

PLANNED DATE	FROM: 30-11-22	TO: 14-12-22	
ACTUAL CLASSES TAKEN	FROM: 05-12-22	TO: 24-12-22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN:	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 03	TUTORIALS: 03	QP DISCUSSION: 03
	QUIZ: —	SEMINARS: 02	ANY OTHER: —

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MODULE 5					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
49.	14-12-22	MON	Introduction, network construction - rules	Covered	
50.	14-12-22	TUE	Fulkerson's rule for numbering the events,	Covered	
51.	15-12-22	WED	AON and AOA diagrams	Covered	
52.	15-12-22	THU	Critical path method (CPM) to find the expected completion time of a project	Covered	
53.	19-12-22	MON	Critical path method (CPM) to find the expected completion time of a project	Covered	
54.	19-12-22	TUE	floats; PERT for finding expected duration of an activity and project,	Covered	
55.	20-12-22	WED	floats; PERT for finding expected duration of an activity and project,	Covered	
56.	21-12-22	THU	determining the probability of completing a project	Covered	
57.	21-12-22	MON	predicting the completion time of project	Covered	
58.	22-12-22	TUE	Crashing of simple projects.	Covered	
59.	22-12-22	WED	Crashing of simple projects.	Covered	
60.	24-12-22	THU	Revision	Covered	
61.	24-12-22	THU	Revision		
62.	26-12-22	SAT	Question paper Discussion	done	

SUMMARY

PLANNED DATE	FROM: 14-12-22	TO: 26-12-22	
ACTUAL CLASSES TAKEN	FROM: 19-12-22	TO: 26-12-22	
NUMBER OF CLASSES	ALLOCATED: 14	TAKEN: 14	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 05	TUTORIALS: 03	QP DISCUSSION: 03
	QUIZ: —	SEMINARS: 03	ANY OTHER: —

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER & INFORMATION SCIENCE ENGINEERING

LESSON PLAN –MACRO SCHEDULE

ODD 22-23 [IS]

SUBJECT	**Project Management**	**STAFF NAME**	**Dr. Suhas G K**
SUBJECT CODE	**18MN752**	**SEM/SEC**	**VII 'B' sec**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

CO1. Understand the selection, prioritization and initiation of individual projects and strategic role of project management

CO2. Understand the work breakdown structure by integrating it with organization.

CO3. Understand the scheduling and uncertainty in projects.

CO4. Students will be able to understand risk management planning using project quality tools.

CO5. Understand the activities like purchasing, acquisitions, contracting, partnering and collaborations related to performing projects.

CO6: Determine project progress and results through balanced scorecard approach

CO7: Draw the network diagram to calculate the duration of the project and reduce it using crashing.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	26/09/22 to 22/10/22	**Introduction:** Definition of project, characteristics of projects, understand projects, types of projects, scalability of project tools, project roles **Project Selection And Prioritization** – Strategic planning process, Strategic analysis, strategic objectives, portfolio alignment – identifying potential projects, methods of selecting projects, financial models / scoring models to select projects, prioritizing projects, securing and negotiating projects. **No. of Contact Sessions: 13**	https://www.youtube.com/watch?v=EQoZIrIbDOI https://www.youtube.com/watch?v=Js8sFMnuFsw
2.	25/10/22 to 15/11/22	**Module -2** **Planning Projects**: Defining the project scope, Project scope checklist, Project priorities, Work Breakdown Structure (WBS), Integrating WBS with organization, coding the WBS for the information system. **Scheduling Projects**: Purpose of a project schedule, historical development, how project schedules are limited and created, develop project schedules, uncertainty in project schedules, Gantt chart. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=t1VMYmW-Ko https://www.youtube.com/watch?v=Nm1VhJSQWs

3.	16/11/22 to 30/11/22	**Module -3** **Resourcing Projects**: Abilities needed when resourcing projects, estimate source needs, creating staffing management plant, project team composition issues, Budgeting Projects: Cost planning, cost estimating, cost budgeting, establishing cost control. **Project Risk Planning**: Risk Management Planning, risk identification, risk analysis, risk response planning, Project Quality Planning and Project Kickoff: Development of quality concepts, project quality management plan, project quality tools, kickoff project, baseline and communicate project management plan, using Microsoft Project for project baselines. **No. of Contact Sessions: 09**	https://www.youtube.com/watch?v=akj4R1xZHeA https://www.youtube.com/watch?v=x7A9idBvPA4
4.	30/11/22 to 14/12/22	**Module -4** **Performing Projects**: Project supply chain management: - Plan purchasing and acquisitions, plan contracting, contact types, project partnering and collaborations, project supply chain management. **Project Progress and Results**: Project Balanced Scorecard Approach, Internal project, customer, financial issues, Finishing the project: Terminate project early, finish projects on time, secure customer feedback and approval, knowledge management, perform administrative and contract closure. **No. of Contact Sessions: 11**	https://www.youtube.com/watch?v=4QjwoNYI1aU https://www.youtube.com/watch?v=wZHHznFF70
5.	14/12/22 to 26/12/22	**Module -5** **Network Analysis** Introduction, network construction - rules, Fulkerson's rule for numbering the events, AON and AOA diagrams, Critical path method (CPM) to find the expected completion time of a project, floats; PERT for finding expected duration of an activity and project, determining the probability of completing a project, predicting the completion time of project; crashing of simple projects. **No. of Contact Sessions: 14**	https://www.youtube.com/watch?v=r5-YGBn4mMw https://www.youtube.com/watch?v=naB0OMbLv9s&list=PLr5RtfZP2r4hf2JoZiF4JQlcAzmnOOV3

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEPTMBER 2022 - DECEMBER 2022) MICRO SCHEDULE ODD 22-23

SUBJECT	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	STAFF NAME	Mrs. Kotramma Mathada
SUBJECT CODE	18CS71	SEM/SEC	VII/B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	26/09/22	MON	What is artificial intelligence?	Covered	
2	29/09/22	THU	The AI problems,the underlying assumption.	Covered	
3	30/09/22	FRI	Problems, problem spaces,Definig the problem as a State space search,production systems,problem characteristics,	Covered	
4	01/10/22	SAT	Problems, problem spaces and search.	Covered	
5	03/10/22	MON	Issues in the Design of search programs	covered	
6	06/10/22	THU	Additional problems.	Covered	
7	07/10/22	FRI	Heuristic search techniques,generate and test, hill Climbing.	Covered	
8	08/10/22	SAT	Hill Climbing, Best-First Search,problem Reduction	Covered	
9	10/10/22	MON	Constraint Satisfaction	covered	
10	10/10/22	MON	Means Ends Analysis	covered	

SUMMARY

PLANNED DATE	FROM: 26.09.22	TO: 10.10.2022	
ACTUAL CLASSES TAKEN	FROM: 26/9/22	TO: 10/10/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION: 1
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Kotramma Mathada
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
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TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	13/10/22	FRI	Knowledge representation issues, Representation and Mappings.	Covered	
14	14/10/22	SAT	Predicate logic.	Covered	
15	15/10/22	MON	Representaton knowledge using rules.	Covered	
16	17/10/22	THU	Concpet Learning.	Covered	
17	20/10/22	FRI	Concept learning task.	Covered	
18	21/10/22	SAT	Concpet learning as search.	Covered	
19	22/10/22	MON	Find-S algorithm.	Covered	
20	31/10/22	THU	Candidate Elimination Algorithm.	Covered	
21	03/11/22	FRI	Inductive bias of Candidate Elimination Algorithm.	Covered	
22	04/11/22	SAT	Inductive bias of Candidate Elimination Algorithm.	Covered	

SUMMARY

PLANNED DATE	FROM: 13.10.2022	TO: 04.11.2022	
ACTUAL CLASSES TAKEN	FROM: 13/10/22	TO: 4/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION: 2
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Kavitha Mathada
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	05/11/22	MON	Decision Tree Learning.	Covered	
26	05/11/22	THU	Introduction.	covered	
27	07/11/22	FRI	Decision tree representation.	covered	
28	10/11/22	SAT	Appropriate problems.	covered	
29	11/11/22	MON	ID3 algorithm	covered	
30	12/11/22	THU	Antificil Nueral Network.	Covered	
31	14/11/22	FRI	Introduction, NN representation.	covered	
32	17/11/22	SAT	Appropriate problems.	Covered	
33	18/11/22	THU	Perceptrons.	covered	
34	19/11/22	FRI	Backpropagation algorithm.	covered	

SUMMARY

PLANNED DATE	FROM: 05.11.2022	TO: 19.11.2022	
ACTUAL CLASSES TAKEN	FROM: 5/11/22	TO: 19/11/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION: 1
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Keerthana Mathada
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	21/11/22	MON	Bayesian Learning.	Covered	
38	23/11/22	WED	Introduction.	covered	
39	23/11/22	WED	Bayes theorem.	Covered	
40	24/11/22	THU	Bayes theorem and concept learning.	covered	
41	25/11/22	FRI	ML and LS error hypothesis.	covered	
42	26/11/22	SAT	ML for predicting.	covered	
43	28/11/22	WED	MDL principle, Bates optimal classifier.	Covered	
44	30/11/22	WED	Gibbs algorithm.	covered	
45	05/12/22	MON	Navie Bayes classifier.	covered	
46	07/12/22	WED	BBN, EM Algorithm.	covered.	

SUMMARY

PLANNED DATE	FROM: 21.11.2022	TO: 07.12.2022	
ACTUAL CLASSES TAKEN	FROM: 21/11/22	TO: 7/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Kotramma Mathada
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	08/12/22	THU	Instance-Base Learning	Covered	
49	09/12/22	FRI	Introduction.	Covered	
50	10/12/22	SAT	k-Nearest Neighbour Learning.	Covered	
51	12/12/22	MON	Locally weighted regression.	covered	
52	14/12/22	WED	Radial basis function	Covered	
53	15/12/22	THU	Case-Based reasoning	Covered	
54	16/12/22	FRI	Reinforcement Learning	Covered	
55	16/12/22	FRI	Introduction	Covered	
56	17/12/22	SAT	The learning task	Covered	
57	17/12/22	SAT	Q-Learning.	Covered	

SUMMARY

PLANNED DATE	FROM: 08.12.2022	TO:17.12.2022	
ACTUAL CLASSES TAKEN	FROM: 8/12/22	TO: 17/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 1	TUTORIALS: 1	QP DISCUSSION: 1
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Kothimma Mathada
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LESSON PLAN (SEPTEMBER 2022 – DECEMBER 2022) MACRO SCHEDULE

ODD 22-23

SUBJECT	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	STAFF NAME	Mrs. Kotramma Mathada
SUBJECT CODE	18CS71	SEM/SEC	VII/B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment.)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

Course Outcomes or COs

At the end of the course the student will be able to

- Appraise the theory of Artificial intelligence and Machine Learning.
- Illustrate the working of AI and ML Algorithms.
- Demonstrate the applications of AI and ML.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	26/9/2022 to 10.10.2022	**Module- 1** What is artificial intelligence? The AI problems,the underlying assumption. Problems, problem spaces,Definig the problem as State space search,production systems,problem cha Problems, problem spaces and search. Issues in the Design of search programs Additional problems. Heuristic search techniques,generate and test, hill C Hill Climbing, Best-First Search,problem Reductio Constraint Satisfaction Means Ends Analysis **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=WUXAjaawjU4&list=PLzxa2go-9WXMf_bt5pMvxjf043jzof4-i https://www.youtube.com/watch?v=BXDyYh1EV2w&list=PLzxa2go-9WXMf_bt5pMvxjf043jzof4-i&index=2 https://www.youtube.com/watch?v=-VMfl_tJwUM&list=PLzxa2go-9WXMf_bt5pMvxjf043jzof4-i&index=6 https://www.youtube.com/watch?v=-VMfl_tJwUM&list=PLzxa2go-9WXMf_bt5pMvxjf043jzof4-i&index=6

2.	13/10/22 to 4/11/2022	**Module -2** Knowledge representation issues,Representation an Predicate logic. Representation knowledge using rules. Concpet Learning. Concept learning task. Concpet learning as search. Find-S algorithm. Candidate Elimination Algorithm. Inductive bias of Candidate Elimination Algorithm Inductive bias of Candidate Elimination Algorithm **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=xJ5EZPwf5g4&list=PLeu2gn-99WXMf_bdpMvxjf843jnof4-i&index=2 https://www.youtube.com/watch?v=SXeIXB086vE&list=PLeu2gn-99WXMf_bdpMvxjf843jnof4-i&index=4 https://www.youtube.com/watch?v=9hJGnbvIinQ&list=PLeu2gn-99WXMf_bdpMvxjf843jnof4-i&index=10 https://www.youtube.com/watch?v=BYfbv4t0wLo&list=PLeu2gn-99WXMf_bdpMvxjf843jnof4-i&index=11
3.	05/11/2022 to 19/11/2022	**Module -3** Decision Tree Learning Introduction Decision tree representation. Appropriate problems ID3 algorithm Artificil Nueral Network. Introduction, NN representation. Appropriate problems. Perceptrons. Backpropagation algorithm. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP346yosQOk https://www.youtube.com/watch?v=5wvLCE-U44g https://www.youtube.com/watch?v=XLiNzla2I20 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+uptel&ots=g1qfshrD2C&sig=L4rbCtF42kSLE-z_gvsZ9GJbsqY#v=onepage&q&f=false

4.	21/11/2022 to 07/12/2022	**Module –4** Bayesian Learning. Introduction. Bayes theorem. Bayes theorem and concept learning. ML and LS error hypothesis. ML for predicting. MDL principle, Bates optimal classifier. Gibbs algorithm. Navie Bayes classifier. BBN, EM Algorithm. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=La-5Z6OHeQ&list=PLRmfzbLr8QYTMm0BnbQtrOr_nWvGdG4 https://www.youtube.com/watch?v=YZBa-9C0BY https://www.youtube.com/watch?v=BB3BXTHCdw&list=PLJpGn4HpwD2a82wdDCf2mdyBc2OWd0Y https://www.classcentral.com/course/youtube-machine-learning-108086?&ref=cl
5.	8/12/2022 to 17/12/2022	**Module -5** Instance-Base Learning Introduction. k-Nearest Neighbour Learning. Locally weighted regression. Radial basis function Case-Based reasoning Reinforcement Learning Introduction The learning task Q-Learning. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Am9SW1T_Qvs&list=PLzou2gn-9WXMf_In5pMvxjf043joof4-i&index=17 https://www.youtube.com/watch?v=H9OEAn3Uc2w&list=PLzou2gn-9WXMf_In5pMvxjf043joof4-i&index=18 https://www.youtube.com/watch?v=fBlyKuk2Ym&list=PLzou2gn-9WXMf_In5pMvxjf043joof4-i&index=22 https://www.youtube.com/watch?v=s2AKMERnfI0&list=PLzou2gn-9WXMf_In5pMvxjf043joof4-i&index=28

Mrs.Kotreshwari Mathada
Staff Incharge

Dr.Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
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TUMKUR - 572106

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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (September 2022 - December 2022) MICRO SCHEDULE

[JS]

ISE
ODD Sem
[2022-23]

SUBJECT	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	STAFF NAME	Mrs. Kotramma Mathada
SUBJECT CODE	18CS71	SEM/SEC	VII/B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	26/09/22	MON	What is artificial intelligence?	covered	
2	29/09/22	THU	The AI problems,the underlying assumption.	Covered	
3	30/09/22	FRI	Problems, problem spaces,Defing the problem as a State space search,production systems,problem characteristics,	covered	
4	01/10/22	SAT	Problems, problem spaces and search.	Covered	
5	03/10/22	MON	Issues in the Design of search programs	Covered	
6	06/10/22	THU	Additional problems.	Covered	
7	07/10/22	FRI	Heuristic search techniques,generate and test, hill Climbing.	Covered	
8	08/10/22	SAT	Hill Climbing, Best-First Search,problem Reduction	Covered	
9	10/10/22	MON	Constraint Satisfaction	Covered	
10	10/10/22		Means Ends Analysis	Covered	

SUMMARY

PLANNED DATE	FROM: 26.09.22	TO: 10.10.2022	
ACTUAL CLASSES TAKEN	FROM: 26.09.22	TO: 10.10.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: 01	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: 01
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Kotramma Mathada
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	13/10/22	FRI	Knowledge representation issues, Representation and Mappings.	Covered	
14	14/10/22	SAT	Predicate logic.	Covered	
15	15/10/22	MON	Representation knowledge using rules.	Covered	
16	17/10/22	THU	Concpet Learning.	Covered	
17	20/10/22	FRI	Concept learning task.	Covered	
18	21/10/22	SAT	Concpet learning as search.	Covered	
19	22/10/22	MON	Find-S algorithm.	Covered	
20	31/10/22	THU	Candidate Elimination Algorithm.	Covered	
21	03/11/22	FRI	Inductive bias of Candidate Elimination Algorithm.	Covered	
22	04/11/22	SAT	Inductive bias of Candidate Elimination Algorithm.	Covered	

SUMMARY

PLANNED DATE	FROM: 13.10.2022	TO: 04.11.2022	
ACTUAL CLASSES TAKEN	FROM: 13.10.2022	TO: 04.11.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: 01 ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: 01
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Khirsagara Mathada
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
25	05/11/22	MON	Decision Tree Learning.	Covered	
26	05/11/22	THU	Introduction.	Covered	
27	07/11/22	FRI	Decision tree representation.	Covered	
28	10/11/22	SAT	Appropriate problems.	Covered	
29	11/11/22	MON	ID3 algorithm	Covered	
30	12/11/22	THU	Artificial Neural Network.	Covered	
31	14/11/22	FRI	Introduction, NN representation.	Covered	
32	17/11/22	SAT	Appropriate problems.	Covered	
33	18/11/22	THU	Perceptrons.	Covered	
34	19/11/22	FRI	Backpropagation algorithm.	Covered	

SUMMARY

PLANNED DATE	FROM: 05.11.2022	TO: 19.11.2022	
ACTUAL CLASSES TAKEN	FROM: 05.11.2022	TO: 19.11.2022	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: 01
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Kaveri Mathada
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
37	21/11/22	MON	Bayesian Learning.	covered	
38	23/11/22	WED	Introduction.	covered	
39	23/11/22	WED	Bayes theorem.	covered	
40	24/11/22	THU	Bayes theorem and concept learning.	covered	
41	25/11/22	FRI	ML and LS error hypothesis.	covered	
42	26/11/22	SAT	ML for predicting.	covered	
43	28/11/22	WED	MDL principle, Bates optimal classifier.	covered	
44	30/11/22	WED	Gibbs algorithm.	covered	
45	05/12/22	MON	Navie Bayes classifier.	covered	
46	07/12/22	WED	BBN, EM Algorithm.	covered	

SUMMARY

PLANNED DATE	FROM: 21.11.2022	TO: 07.12.2022	
ACTUAL CLASSES TAKEN	FROM: 21.11.2022	TO: 07.12.2022	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: 01
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Komalatha Mathada
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
48	08/12/22	THU	Instance-Base Learning	covered	
49	09/12/22	FRI	Introduction.	covered	
50	10/12/22	SAT	k-Nearest Neighbour Learning.	covered	
51	12/12/22	MON	Locally weighted regression.	covered	
52	14/12/22	WED	Radial basis function	covered	
53	15/12/22	THU	Case-Based reasoning	covered	
54	16/12/22	FRI	Reinforcement Learning	covered	
55	16/12/22	FRI	Introduction	covered	
56	17/12/22	SAT	The learning task	covered	
57	17/12/22	SAT	Q-Learning.	covered	

SUMMARY

PLANNED DATE	FROM: 08.12.2022	TO:17.12.2022	
ACTUAL CLASSES TAKEN	FROM: 08.12.2022.	TO: 17.12.2022.	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS: 01	QP DISCUSSION: 01
	QUIZ:	SEMINARS:	ANY OTHER:

Mrs. Kotreshwari Mathada
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

LESSON PLAN (SEPTEMBER 2022 – DECEMBER 2022) MACRO SCHEDULE

SUBJECT	**ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**	**STAFF NAME**	**Mrs. Kotramma Mathada**
SUBJECT CODE	**18CS71**	**SEM/SEC**	**VII/B**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment.)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)**

Course Outcomes or COs

At the end of the course the student will be able to

- Appraise the theory of Artificial intelligence and Machine Learning.
- Illustrate the working of AI and ML Algorithms.
- Demonstrate the applications of AI and ML.

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	26/9/2022 to 10.10.2022	**Module- 1** What is artificial intelligence? The AI problems,the underlying assumption. Problems, problem spaces,Defini the problem as State space search,production systems,problem cha Problems, problem spaces and search. Issues in the Design of search programs Additional problems. Heuristic search techniques,generate and test, hill Hill Climbing, Best-First Search,problem Reducti Constraint Satisfaction Means Ends Analysis **No, of Contact Sessions: 10**	https://www.youtube.com/watch?v=WUYAjxow1U4&list=PLzxu3gp-9WXMf_bt5pMvxj0043jnof4-i https://www.youtube.com/watch?v=BXDvYh1EY2w&list=PLzxu3gp-9WXMf_bt5pMvxj0043jnof4-i&index=2 https://www.youtube.com/watch?v=VMjI_IIwUM&list=PLzxu3gp-9WXMf_bt5pMvxj0043jnof4-i&index=6 https://www.youtube.com/watch?v=VMjI_IIwUM&list=PLzxu3gp-9WXMf_bt5pMvxj0043jnof4-i&index=6

2.	13/10/22 to 4/11/2022	**Module -2** Knowledge representation issues,Representation as Predicate logic. Representaiton knowledge using rules. Concpet Learning. Concept learning task. Concpet learning as search. Find-S algorithm. Candidate Elimination Algorithm. Inductive bias of Candidate Elimination Algorithm Inductive bias of Candidate Elimination Algorithm **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=sJVEZPwHgAA&list=PLeoo2gp-9WXMf_InSpMvvjf943jmf4-i&index=3 https://www.youtube.com/watch?v=SXzfXB66t-E&list=PLeoo2gp-9WXMf_InSpMvvjf943jmf4-i&index=4 https://www.youtube.com/watch?v=0KiGnkec1sY&list=PLeoo2gp-9WXMf_InSpMvvjf943jmf4-i&index=10 https://www.youtube.com/watch?v=BYtbc4iDeLo&list=PLeoo2gp-9WXMf_InSpMvvjf943jmf4-i&index=11
3.	05/11/2022 to 19/11/2022	**Module -3** Decision Tree Learning Introduction Decision tree representation. Appropriate problems ID3 algorithm Artificil Nueral Network. Introduction, NN representation. Appropriate problems. Perceptrons. Backpropagation algorithm. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP346voaQOk https://www.youtube.com/watch?v=SwvLCE-U44g https://www.youtube.com/watch?v=X1iNzla2I20 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-commercial-insurers-codex2295.pdf https://books.google.co.in/books?hl=en&lr=&id=QdPTDwAAQBAJ&oi=fnd&pg=PT27&dq=Application+Protocols+for+IoT+topics&ots=g1qfshrDC5&sig=L4rbC1F42kSLE-z_gvsZ9GfxqY8#v=onepage&q&f=false

4.	21/11/2022 to 07/12/2022	**Module -4** Bayesian Learning. Introduction. Bayes theorem. Bayes theorem and concept learning. ML and LS error hypothesis. ML for predicting. MDL principle, Bates optimal classifier. Gibbs algorithm. Navie Bayes classifier. BBN, EM Algorithm. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=LaNZAiOhQA&list=PLRwvFtKLe9jN7Mm5Bp6dDwvUw_sb=GPt4 https://www.youtube.com/watch?v=YZf5a-ICBIY https://www.youtube.com/watch?v=BBM8XIIiCdw&list=PL3pGx4fBaxrB2a32w0fX2InnIuRJ2WzPY https://www.slocoptim.com/article/article.asp?a=288867&print=1
5.	8/12/2022 to 17/12/2022	**Module -5** Instance-Base Learning Introduction. k-Nearest Neighbour Learning. Locally weighted regression. Radial basis function Case-Based reasoning Reinforcement Learning Introduction The learning task Q-Learning. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Am95W1T_Qvs&list=PLrxu2gn-9WXMf_In5pMvxjf043jnnf4-i&index=17 https://www.youtube.com/watch?v=H9OEAn3Uc2w&list=PLrxu2gn-9WXMf_In5pMvxjf043jnnf4-i&index=18 https://www.youtube.com/watch?v=fBtyKuk2VmIc&list=PLrxu2gn-9WXMf_In5pMvxjf043jnnf4-i&index=22 https://www.youtube.com/watch?v=s2AKMERnl8Q&list=PLrxu2gn-9WXMf_In5pMvxjf043jnnf4-i&index=28

Mrs.Kavitha Mathada
Staff Incharge

Dr.Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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TUMKUR - 572 106

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2022-23 Odd sem.) MICRO SCHEDULE

ODD 22-23

SUBJECT	BIG DATA AND ANALYTICS	STAFF NAME	Dr. Dinesha H. A.
SUBJECT CODE	18CS72	SEM	VII (B section)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum 60 Exam Marks (SEE)	Question paper will be set and evaluated for 100 marks and later reduced to 60

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	28/09/22	WED	Big Data: About and usage	Big Data: About and usage	COMPLETED
2	29/09/22	THU	Introduction and Applications	Introduction and Applications	COMPLETED
3	11/10/22	TUE	Scalability	Scalability	COMPLETED
4	11/10/22	TUE	Parallel Processing	Parallel Processing	COMPLETED
5	12/10/22	WED	Designing Data Architecture	Designing Data Architecture	-1-
6	13/10/22	THU	Data Sources	Data Sources	-1-
7	14/10/22	FRI	Quality	Quality	-1-
8	19/10/22	WED	Pre-Processing and storing	Pre-Processing and storing	-1-
9	20/10/22	THU	Data Storage and Analysis	Data Storage and Analysis	-1-
10	03/11/22	THU	Big Data Analytics Applications and Case Studies	Big Data Analytics Applications and Case Studies	COMPLETED

SUMMARY

PLANNED DATE	FROM: 28/09/22	TO: 03/11/22	
ACTUAL CLASSES TAKEN	FROM: 28/09/22	TO: 03/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: 1 & 2 Module- YES	IA 2: 3 Module -	IA 3: 4,5 Module -
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:1 -	TUTORIALS: -	QP DISCUSSION:1
	QUIZ: -	SEMINARS: -	ANY OTHER: -

Dr. Dinesha H. A.
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	04/11/22	FRI	Introduction	Introduction	COMPLETED
12	05/11/22	SAT	Hadoop and its Ecosystem	Hadoop and its Ecosystem	-1-
13	09/11/22	WED	Hadoop Distributed File System	Hadoop Distributed File System	-1-
14	09/11/22	WED	Hadoop Distributed File System	Hadoop Distributed File System	-1-
15	09/11/22	WED	MapReduce Framework	MapReduce Framework	-1-
16	11/11/22	FRI	Programming Model	Programming Model	-1-
17	12/11/22	SAT	Hadoop Yarn	Hadoop Yarn	-1-
18	16/11/22	WED	Hadoop	Hadoop	-1-
19	16/11/22	WED	Hadoop	Hadoop	-1-
20	18/11/22	FRI	Ecosystem Tools	Ecosystem Tools	COMPLETED

SUMMARY

PLANNED DATE	FROM: 04/11/22	TO: 18/11/22	
ACTUAL CLASSES TAKEN	FROM: 04/11/22	TO: 18/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: 1.5 Module Yes	IA 2: 3 Module Yes	IA 3: 4.5 Module
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:1	TUTORIALS: —	QP DISCUSSION:1
	QUIZ: —	SEMINARS: —	ANY OTHER: —

Dr. Dinesha H. A.
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
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MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	19/11/22	SAT	Introduction	Introduction	COMPLETED
22	25/11/22	FRI	NoSQL Datastore	NoSQL Datastore	-1-
23	26/11/22	SAT	NoSQL Data Architecture Patterns	NoSQL Data Architecture Patterns	-1-
24	26/11/22	SAT	NoSQL Data Architecture Patterns	NoSQL Data Architecture Patterns	-1-
25	28/11/22	MON	NoSQL to Manage Big Data	NoSQL to Manage Big Data	-1-
26	30/11/22	WED	NoSQL to Manage Big Data	NoSQL to Manage Big Data	-1-
27	30/11/22	WED	Shared-Nothing Architecture for Big Data Tasks	Shared-Nothing Architecture for Big Data Tasks	-1-
28	07/12/22	WED	MongoDB	MongoDB	-1-
29	07/12/22	WED	Databases	Databases	-1-
30	09/12/22	FRI	Cassandra Databases	Cassandra Databases	COMPLETED

SUMMARY

PLANNED DATE	**FROM:** 19/11/22	**TO:** 09/12/22	
ACTUAL CLASSES TAKEN	**FROM:** 19/11/22	**TO:** 09/12/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:10**	
CONTENT COVERED FOR IA	**IA 1: 1-6 Module**	**IA 2: 3 Module** Yes	**IA 3: 4-5 Module**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:1**	**TUTORIALS:** -	**QP DISCUSSION:1**
	QUIZ: -	**SEMINARS:** Yes	**ANY OTHER:**

Dr. Dinesha H. A.
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	10/12/22	SAT	Introduction	Introduction	Completed
32	14/12/22	WED	MapReduce Map Tasks	MapReduce Map Tasks	— 1 —
33	14/12/22	WED	MapReduce Map Tasks	MapReduce Map Tasks	— 1 —
34	16/12/22	FRI	Reduce Tasks and MapReduce Execution	Reduce Tasks and MapReduce Execution	— 1 —
35	17/12/22	SAT	Reduce Tasks and MapReduce Execution	Reduce Tasks and MapReduce Execution	— 1 —
36	17/12/22	SAT	Composing MapReduce for Calculations and Algorithms	Composing MapReduce for Calculations and Algorithms	— 1 —
37	19/12/22	MON	Composing MapReduce for Calculations and Algorithms	Composing MapReduce for Calculations and Algorithms	— 1 —
38	19/12/22	MON	Hive	Hive	— 1 —
39	20/12/22	TUE	HiveQL	HiveQL	— 1 —
40	21/12/22	WED	Pig	Pig	Completed

SUMMARY

PLANNED DATE	FROM: 10/12/22	TO: 21/12/22	
ACTUAL CLASSES TAKEN	FROM: 10/12/22	TO: 21/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:10	
CONTENT COVERED FOR IA	IA 1: 1.5 Module —	IA 2: 3 Module —	IA 3: 4.5 Module Yes
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:1	TUTORIALS: —	QP DISCUSSION:1
	QUIZ: —	SEMINARS: Yes	ANY OTHER:

Dr. Dinesha H. A.
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	21/12/22	WED	Introduction	Introduction	COMPLETED
42	24/12/22	SAT	Estimating the relationships	Estimating the relationships	—
43	26/12/22	MON	Outliers	Outliers	SEMINAR
44	26/12/22	MON	Variances	Variances	—
45	27/12/22	TUE	Probability Distributions and Correlations	Probability Distributions and Correlations	—
46	27/12/22	TUE	Regression analysis	Regression analysis	—
47	28/12/22	WED	Finding Similar Items	Finding Similar Items	—
48	28/12/22	WED	Similarity of Sets and Collaborative Filtering	Similarity of Sets and Collaborative Filtering	—
49	30/12/22	FRI	Frequent Itemset and Association Rule Mining	Frequent Itemset and Association Rule Mining	—
50	30/12/22	FRI	Frequent Itemset and Association Rule Mining	Frequent Itemset and Association Rule Mining	SEMINAR

SUMMARY

PLANNED DATE	**FROM:** 21/12/22	**TO:** 30/12/22	
ACTUAL CLASSES TAKEN	**FROM:**21/12/22	**TO:**30/12/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN: 20**	
CONTENT COVERED FOR IA	**IA 1: 1.5 Module**	**IA 2: 3 Module**	**IA 3: 4.5 Module** Yes
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS: 05**	**TUTORIALS:** —	**QP DISCUSSION:03**
	QUIZ-01	**SEMINARS:01**	**ANY OTHER:** —

Dr. Dinesha H. A.
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

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SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2022-23) MACROSCHEDULE

ODD 22-23

SUBJECT	BIG DATA AND ANALYTICS	STAFF NAME	Dr, Dinesha H. A
SUBJECT CODE	18CS724	SEM	VII (B sec)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam 60 Marks (SEE)	(Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Understand fundamentals of Big Data analytics
- **CO2**: Explore the Hadoop framework and Hadoop Distributed File system
- **CO3**: Illustrate the concepts of NoSQL using MongoDB and Cassandra for Big Data
- **CO4**: Employ MapReduce programming model to process the big data
- **CO5**: Understand various machine learning algorithms for Big Data Analytics, Web Mining and Social Network Analysis.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	26/09/22 to 01/10/22	**Module 1** **Introduction to Big Data Analytics:** Big Data, Scalability and Parallel Processing, Designing Data Architecture, Data Sources, Quality, Pre-Processing and Storing, Data Storage and Analysis, Big Data Analytics Applications and Case Studies.	https://www.youtube.com/watch?v=8_kn0D4nOr0
2.	04/11/22 to 18/11/22	**Module 2** **Introduction to Hadoop (T1):** Introduction, Hadoop and its Ecosystem, Hadoop Distributed File System, MapReduce Framework and Programming Model, Hadoop Yarn, Hadoop Ecosystem Tools.	https://www.youtube.com/watch?v=jis8tcbg2CU
3.	18/11/22 to 9/12/22	**Module 3** **NoSQL Big Data Management, MongoDB and Cassandra:** Introduction, NoSQL Data Store, NoSQL Data Architecture Patterns, NoSQL to Manage Big Data, Shared-Nothing Architecture for Big Data Tasks, MongoDB, Databases, Cassandra Databases.	https://www.youtube.com/watch?v=QkgvIUeqeis

4.	10/11/22 to 2./11/22	**Module 4** **MapReduce, Hive and Pig**: Introduction, MapReduce Map Tasks, Reduce Tasks and MapReduce Execution, Composing MapReduce for Calculations and Algorithms, Hive, HiveQL, Pig.	https://www.youtube.com/watch?v=LEeQVPeNDSo
5.	5./12/22 to 30/12/22	**MODULE-5**: **Machine Learning Algorithms for Big Data Analytics:** Introduction, Estimating the relationships, Outliers, Variances, Probability Distributions, and Correlations, Regression analysis, Finding Similar Items, Similarity of Sets and Collaborative Filtering, Frequent Itemset and Association Rule Mining	https://www.youtube.com/watch?v=NUXdiNIWJEE&list=PLEiEAq2VkULUNa6NBQoAZSO0raB6HHDNJ4

Dr, Dinesha H. A
Staff Incharge

Dr.Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CSE

LESSON PLAN (OCT2022-JAN2023) MICROSCHEDULE

ODD Sem [2022-23]

COURSE NAME	UNIX PROGRAMMING	STAFF NAME	PROF. SHANMUKASWAMY CV
COURSE CODE	18CS56	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	11/10/22	TUE	**Introduction:** Unix Components/Architecture. Features of UnixThe root login	Covered	
2	12/10/22	WED	The UNIX Environment and UNIX Structure Posix and Single Unix specification	Covered	
3	14/10/22	FRI	General features of Unix commands/ command structure. Command arguments and options	Covered	
4	15/10/22	SAT	Basic Unix commands such as echo, printf, ls, who, date,passwd, cal, Combining commands	Covered	
5	18/10/22	TUE	Meaning of Internal and external commands. The type command: knowing the type of a command and locating it	Covered	
6	19/10/22	WED	Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files.	Covered	
7	21/10/22	FRI	Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable.	Covered	
8	22/10/22	SAT	Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames.	Covered	
9	25/10/22	TUE	Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names.	Covered	
10	28/10/22	FRI	File related commands – cat, mv, rm, cp, wc and od commands	Covered	

SUMMARY

PLANNED DATE	FROM: 11/10/22	TO: 28/10/22	
ACTUAL CLASSES TAKEN	FROM: 11/10/22	TO: 28/10/22	
NUMBER OF CLASSES	ALLOCATED:10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: 01	TUTORIALS:	QP DISCUSSION: Yes
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	29/10/22	SAT	**File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods.	Covered	
12	02/11/22	WED	Recursively changing file permissions. Directory permissions.	Covered	
13	04/11/22	FRI	The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards.	Covered	
14	05/11/22	SAT	Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions.	Covered	
15	08/11/22	TUE	The grep, egrep. Typical examples involving different regular expressions	Covered	
16	09/11/22	WED	**Shell programming:** Ordinary and environment variables. The .Profile. Read and readonly commands.	Covered	
17	15/11/22	TUE	Command line arguments. Exit and exit status of a command.	Covered	
18	16/11/22	WED	Logical operators for conditional execution. The test command and its shortcut	Covered	
19	18/11/22	FRI	The if, while, for and case control statements. The set and shift commands and handling positional parameters.	Covered	
20	19/11/22	SAT	The here (<<) document and trap command. Simple shell program examples	Covered	
21	22/11/22	TUE	Qp Discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 29/10/22**	**TO: 22/11/22**	
ACTUAL CLASSES TAKEN	**FROM:** 29/10/22	**TO:** 22/11/22	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** ✓ (Yes)	**IA 2:** ✓ (Yes)	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes	**TUTORIALS:**	**QP DISCUSSION:** Yes
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
22	23/11/22	WED	**UNIX File APIs:** General File APIs,	Covered	
23	25/11/22	FRI	File and Record Locking,	covered	
24	26/11/22	SAT	Directory File APIs, Device File APIs,	Covered	
25	29/11/22	TUE	FIFO File APIs, Symbolic Link File APIs	covered	
26	30/11/22	WED	UNIX Processes and Process Control	Covered	
27	02/12/22	FRI	**The Environment of a UNIX Process:** Introduction, main function, Process Termination,	Covered	
28	03/12/22	SAT	Command-Line Arguments, Environment List, Memory Layout of a C Program,	Covered	
29	06/12/22	TUE	Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions,	Covered	
30	07/12/22	WED	, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork	Covered	
31	09/12/22	FRI	exit, wait, waitpid, wait3,wait4 Functions, Race Conditions, exec Functions	Covered	

SUMMARY

PLANNED DATE	**FROM: 23/11/22**	**TO:09/12/22**	
ACTUAL CLASSES TAKEN	**FROM:** 23/11/22	**TO:** 09/12/22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** -	**IA 2:** Yes	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Yes, No. 2.	**TUTORIALS:**	**QP DISCUSSION:** Yes
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
32	10/12/22	SAT	Changing User IDs and Group IDs, Interpreter Files	Covered	
33	13/12/22	TUE	system Function, Process Accounting	Covered	
34	14/12/22	WED	User Identification, Process Times, I/O Redirection.	Covered	
35	20/12/22	TUE	**Overview of IPC Methods**, Pipes, popen, pclose	Covered	
36	21/12/22	WED	Functions, Coprocesses, FIFOs,	Covered	
37	23/12/22	FRI	System V IPC, Message Queues, Semaphores.	Covered	
38	24/12/22	SAT	**Shared Memory,** Client-Server Properties, Stream Pipes,	Covered	
39	27/12/22	TUE	Passing File Descriptors,	Covered	
40	28/12/22	WED	An Open Server-Version 1	Covered	
41	31/12/22	SAT	Client-Server Connection Functions.	Covered	
42	03/01/23	TUE	Solving Previous Question Paper	Covered	

SUMMARY

PLANNED DATE	FROM:10/12/22	TO: 03/01/23	
ACTUAL CLASSES TAKEN	FROM: 10/12/22	TO: 3/1/23	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: —	IA 2: Yes 1/2	IA 3: Yes —
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: Yes	TUTORIALS: —	QP DISCUSSION: Yes
	QUIZ: —	SEMINARS: —	ANY OTHER: —

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
43	04/01/23	WED	**Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals	Covered	
44	06/01/23	FRI	signal, Signal Mask, sigaction	Covered	
45	07/01/23	SAT	The SIGCHLD Signal and the waitpid Function,	Covered	
46	10/01/23	TUE	The sigsetjmp and siglongjmp Functions,	Covered	
47	11/01/23	WED	Kill, Alarm, Interval Timers	Covered	
48	13/01/23	FRI	POSIX.1b Timers.	Covered	
49	20/01/23	FRI	Daemon Processes: Introduction	Covered	
50	21/01/23	SAT	Daemon ChUEaracteristics,	Covered	
51	24/01/23	TUE	Coding Rules, Error Logging.	Covered	
52	25/01/23	WED	Client-Server Model.	Covered	
53	27/01/23	FRI	Quiz	Covered	

SUMMARY

PLANNED DATE	**FROM: 04/01/23**	**TO: 27/01/23**	
ACTUAL CLASSES TAKEN	**FROM:** 4/1/23	**TO:** 28/1/23	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN: 10**	
CONTENT COVERED FOR IA	**IA 1:** —	**IA 2:** —	**IA 3:** Y/N
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** Y/N	**TUTORIALS:** —	**QP DISCUSSION:** Y/N
	QUIZ: —	**SEMINARS:** —	**ANY OTHER:** —

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TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2022 –JAN 2023) MACROSCHEDULE

COURSE	**UNIX PROGRAMMING**	**STAFF NAME**	**PROF. SHANMUKASWAMY C V**
COURSE CODE	**18CS56**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or COs

- Explain Unix Architecture, File system and use of Basic Commands
- Illustrate Shell Programming and to write Shell Scripts
- Categorize, compare and make use of Unix System Calls
- Build an application/service over a Unix system.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	11.10.2022 to 28.10.2022	**Module –1** **Introduction:** Unix Components/Architecture, Features of Unix. The UNIX Environment and UNIX Structure, Posix and Single Unix specification. General features of Unix commands/ command structure. Command arguments and options. Basic Unix commands such as echo, printf, ls, who, date,passwd, cat, Combining commands. Meaning of Internal and external commands. The type command: knowing the type of a command and locating it. The root login. Becoming the super user: su command. **Unix files:** Naming files. Basic file types/categories. Organization of files. Hidden files. Standard directories. Parent child relationship. The home directory and the HOME variable. Reaching required files- the PATH variable, manipulating the PATH, Relative and absolute pathnames. Directory commands – pwd, cd, mkdir, rmdir commands. The dot (.) and double dots (..) notations to represent present and parent directories and their usage in relative path names. File related commands – cat, mv, rm, cp, we and od commands **No. of Contact Sessions: 10**	http://www.ee.surrey.ac.uk/Teaching/Unix/unix1intro.html https://www.geeksforgeeks.org/introduction-to-unix-system/ https://www.tutorialspoint.com/unix/unix-file-management.htm

2	29.10.2022 To 22.11.2022	**Module –2** **File attributes and permissions:** The ls command with options. Changing file permissions: the relative and absolute permissions changing methods. Recursively changing file permissions. Directory permissions. The shells interpretive cycle: Wild cards. Removing the special meanings of wild cards. Three standard files and redirection. Connecting commands: Pipe. Basic and Extended regular expressions. The grep, egrep. Typical examples involving different regular expressions. **Shell programming:** Ordinaryand environment variables. The. Profile. Read and readonly commands. Command line arguments. Exit and exit status of a command. Logical operators for conditional execution. The test command and its shortcut. The if, while, for and case control statements. The set and shift commands and handling positional parameters. The here (<<) document and trap command. Simple shell program examples **No. of Contact Sessions: 11**	https://www.tutorialspoint.com/unix/unix-file-permission.htm https://wiki.archlinux.org/title/File_permissions_and_attributes https://www.youtube.com/watch?v=NPb0IWZuBG4
3	23.11.22 to 09.12.2022	**Module –3** **UNIX File APIs:** General File APIs, File and Record Locking, Directory File APIs, Device File APIs, FIFO File APIs, Symbolic Link File APIs. UNIX Processes and Process Control **The Environment of a UNIX Process:** Introduction, main function, Process Termination, Command-Line Arguments, Environment List, Memory Layout of a C Program, Shared Libraries, Memory Allocation, Environment Variables, setjmp and longjmp Functions, getrlimit, setrlimit Functions, UNIX Kernel Support for Processes. Process Control: Introduction, Process Identifiers, fork, vfork, exit, wait, waitpid, wait3, wait4 Functions, Race Conditions, exec Functions. **No. of Contact Sessions: 10**	https://www.slideshare.net/ChetanKhanna/unix-file-apis-163731999 https://en.wikipedia.org/wiki/File_system_API https://www.youtube.com/watch?v=NkXi525Dbr0
4	10.12.2022 To 03.01.2023	**Module–4** Changing User IDs and Group IDs, Interpreter Files, system Function, Process Accounting, User Identification, Process Times, I/O Redirection. **Overview of IPC Methods,** Pipes, popen, pclose Functions, Coprocesses, FIFOs, System V IPC, Message Queues, Semaphores. **Shared Memory,** Client-Server Properties, Stream Pipes, Passing File Descriptors, An Open Server-Version 1, Client-Server Connection Functions. **No. of Contact Sessions: 11**	https://www.geeksforgeeks.org/methods-in-interprocess-communication/ https://www.javatpoint.com/inter-process-communication-in-java.html https://www.youtube.com/watch?v=4vVkXJ0Pvo

5	04.01.2023 to 27.01.23	**Module–5** **Signals and Daemon Processes:** Signals: The UNIX Kernel Support for Signals, signal, Signal Mask, sigaction, The SIGCHLD Signal and the waitpid Function, The sigsetjmp and siglongjmp Functions, Kill, Alarm, Interval Timers, POSIX.lb Timers. Daemon Processes: Introduction, Daemon Characteristics, Coding Rules, Error Logging, Client-Server Model. **No. of Contact Sessions: 11**	http://www.math.uu.se/research/telecom/education/network/project/labs/handbook/basics/daemon.html https://www.scribd.com/document/56143374/Signals-and-Daemon-Processes-ppts https://www.youtube.com/watch?v=2aEDqGOuvfIs

Textbooks:

1. Sumitabha Das., Unix Concepts and Applications., 4thEdition., Tata McGraw Hill (Chapter 1,2,3,4,5,6,8,13,14)
2. W. Richard Stevens: Advanced Programming in the UNIX Environment, 2nd Edition, Pearson Education, 2005 (Chapter 3,7,8,10,13,15)
3. Unix System Programming Using C++ - Terrence Chan, PHI, 1999. (Chapter 7,8,9,10).

Reference Books:

1. M.G. Venkatesh Murthy: UNIX & Shell Programming, Pearson Education.
2. Richard Blum , Christine Bresnahan : Linux Command Line and Shell Scripting Bible, 2nd Edition, Wiley,2014.

FACULTY HOD PRINCIPAL

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SHREENIVAS INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT FEB 2023) MICROSCHEDULE Eodd-22-13)

SUBJECT	ATC	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS54	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	10/10/22	MON	**Why study the Theory of Computation, Languages and Strings**: Strings, Languages	Covered	
2	13/10/22	THU	A Language Hierarchy, Computation,	Covered	
3	14/10/21	FRI	**Finite State Machines (FSM)**: Deterministic FSM,	Covered	
4	15/10/22	SAT	Regular languages,	Covered	
5	17/10/22	MON	Designing FSM, Nondeterministic FSMs,	Covered	
6	20/10/22	THU	From FSMs to Operational Systems, Simulators forFSMs,	Covered	
7	21/10/22	FRI	Minimizing FSMs,	Covered	
8	22/10/22	SAT	Canonical form of Regular languages,	Covered	
9	27/10/22	THU	Canonical form of Regular languages,	Covered	
10	28/10/22	FRI	Bidirectional Transducers,	Covered	

SUMMARY

PLANNED DATE	FROM: 10.10.2022	TO: 28.10.2022	
ACTUAL CLASSES TAKEN	FROM: 10/10/22	TO: 28/10/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M

Dr. Basavesha D

PRINCIPAL
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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	29/10/22	SAT	Regular Expressions (RE): what is a RE?	Covered	
12	31/10/22	MON	Kleene's theorem, Applications of REs	Covered	
13	03/11/22	THU	Problem Issues	Covered	
14	04/11/22	FRI	Manipulating and Simplifying REs. Regular Grammars	Covered	
15	05/11/22	SAT	Definition, Regular Grammars and Regular languages	Covered	
16	07/11/22	MON	Regular Languages (RL) and Non-regular Languages	Covered	
17	17/11/22	THU	How many RLs. To show that a language is regular	Covered	
18	18/11/22	FRI	Closure properties of RLs	Covered	
19	19/11/22	SAT	to show some languages are not RLs.	Covered	
20	21/11/22	MON	Other Applications.	Covered	

SUMMARY

PLANNED DATE	FROM: 29.10.2022	TO: 21.11.2022	
ACTUAL CLASSES TAKEN	FROM: 29/10/22	TO: 21/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	24/11/22	THU	Context-Free Grammars(CFG): Introduction to Rewrite Systems and Grammars	Covered	
22	25/11/22	FRI	CFGs and languages, designing CFGs, simplifying CFGs	Covered	
23	26/11/22	SAT	proving that a Grammar is correct	Covered	
24	28/11/22	MON	Derivation and Parse trees, Ambiguity, Normal Forms	Covered	
25	01/12/22	THU	Pushdown Automata (PDA): Definition of non-deterministic PDA	Covered	
26	02/12/22	FRI	Deterministic and Non-deterministic PDAs	Covered	
27	03/12/22	SAT	Nondeterminism and Halting	Covered	
28	05/12/22	MON	alternatives that are not equivalent to PDA	Covered	
29	08/12/22	THU	Pushdown Automata (PDA)	Covered	
30	09/12/22	FRI	Problems	Covered	

SUMMARY

PLANNED DATE	FROM: 24.11.2022	TO:09.12.2022	
ACTUAL CLASSES TAKEN	FROM: 24/11/22	TO: 9/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	10/12/22	SAT	Algorithms and Decision Procedures for CFLs	Covered	
32	12/12/22	MON	Decidable questions	Covered	
33	15/12/22	THU	Un-decidable questions	Covered	
34	22/12/22	THU	Turing Machine: Turing machine model	Covered	
35	23/12/22	FRI	Representation	Covered	
36	24/12/22	SAT	Language acceptability by TM	Covered	
37	26/12/22	MON	design of TM	Covered	
38	29/12/22	THU	Techniques for TM construction	Covered	
39	30/12/22	FRI	Variants of Turing Machines (TM)	Covered	
40	31/12/22	TUE	The model of Linear Bounded automata	Covered	

SUMMARY

PLANNED DATE	FROM: 10.12.2022	TO: 31.12.2022	
ACTUAL CLASSES TAKEN	FROM: 10/12/22	TO: 31/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ: -	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Nandini Vasudevan
Principal
SIET, TUMAKURU

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	02/01/23	MON	Decidability: Definition of an algorithm	Covered	
42	05/01/23	THU	decidability	Covered	
43	06/01/23	FRI	decidable languages	Covered	
44	07/01/23	SAT	Undecidable languages, halting problem of TM	Covered	
45	09/01/23	MON	, Post correspondence problem	Covered	
46	12/01/23	THU	Complexity: Growth rate 08 of functions	Covered	
47	13/01/23	FRI	the classes of P and NP	Covered	
48	14/01/23	SAT	Quantum Computation: quantum computers	Covered	
49	19/01/23	THU	Quantum Computation: quantum computers, ChurchTuring thesis	Covered	
50	20/01/23	MON	Applications: CFT Defining syntax of programming language.	Covered	
51	26/01/23	THU	Question paper discussion	Covered	
52	25/01/23	WED	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 02.01.2023	TO: 25.01.2023	
ACTUAL CLASSES TAKEN	FROM: 02/1/23	TO: 25/1/23	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ~
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ~	TUTORIALS:	QP DISCUSSION: ~
	QUIZ:	SEMINARS:	ANY OTHER:

Kiran G M
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Naren
Principal
SHRINIVAS INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT -FEB 2023) MACRO SCHEDULE (ODD 22-23)

SUBJECT	ATC	STAFF NAME	KIRAN G M
SUBJECT CODE	18CS54	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- Demonstrate need for ATC and different types of OS
- Discuss suitable techniques for management of different ATC techniques
- Illustrate DFA, NFA, NDFA for different applicable applications
- Explain the different concepts of ATC in platform of usage through case studies

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	10.10.2022 to 28.10.2022	**Module- 1:** Why study the Theory of Computation, Languages and Strings: Strings, Languages, A Language Hierarchy, Computation, Finite State Machines (FSM): Deterministic FSM, Regular languages, Designing FSM, Nondeterministic FSMs, From FSMs to Operational Systems, Simulators for FSMs, Minimizing FSMs, Canonical form of Regular languages, Finite State Transducers, Bidirectional Transducers. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=BqqwWuT7IM https://www.youtube.com/watch?v=aF2nBmHvwsA&list=PLrjkTnBhjmPUI0PbP0WQ0GHGNkLwBFv https://www.youtube.com/watch?v=TAbB2IWeIuI https://www.youtube.com/watch?v=tWFwzZGM8 https://www.youtube.com/watch?v=Na2vABWEC8
2	29.10.2022 to 21.11.2022	**Module -2** Regular Expressions (RE): what is a RE?, Kleene"s theorem, Applications of REs, Manipulating and Simplifying REs. Regular Grammars: Definition, Regular Grammars and Regular languages. Regular Languages (RL) and Non-regular Languages: How many RLs, To show that a language is regular, Closure properties of RLs, to show some languages are not RLs. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=1Z7Ji0rUMh https://www.youtube.com/watch?v=AVKk0GwFLA8&t=9Ls&ab_channel=VtuNaveenSW https://www.youtube.com/watch?v=m0Y33OwZEg
3		**Module -3:** Context-Free Grammars(CFG): Introduction to Rewrite Systems and Grammars, CFGs and languages, designing	https://www.youtube.com/watch?v=mH_nmcvYbmI&list=PLbGui_ZYuhigda6-9B-0zeVmcmcmoiaIr

	24.11.2022 **to** **09.12.2022**	CFGs, simplifying CFGs, proving that a Grammar is correct, Derivation and Parse trees, Ambiguity, Normal Forms, Pushdown Automata (PDA): Definition of non-deterministic PDA, Deterministic and Non-deterministic PDAs, Nondeterminism and Halting, alternative equivalent definitions of a PDA, alternatives that are not equivalent to PDA. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=EVmwyZ92nf0 https://www.youtube.com/results?search_query=Moore%27s+management+strategies%3A+Background%3B+Swapping%3B
4	**10.12.2022** **to** **31.12.2022**	**Module –4** Algorithms and Decision Procedures for CFLs: Decidable questions. Un-decidable questions. Turing Machine: Turing machine model, Representation, Language acceptability by TM, design of TM, Techniques for TM construction. Variants of Turing Machines (TM), The model of Linear Bounded automata. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=NPbcwIn3Zd8 https://www.youtube.com/watch?v=sBLu_nuZ58 https://www.youtube.com/watch?v=r8Rr9AbqHEs https://www.youtube.com/watch?v=23HagSmk0t8&list=PLzkQvPDUb0sKgGGBzLv2sMnYkRTbw1A3
5	**02.01.2023** **to** **25.01.2023**	**Module -5** Decidability: Definition of an algorithm, decidability, decidable languages, Undecidable languages, halting problem of TM, Post correspondence problem. Complexity: Growth rate 08 of functions, the classes of P and NP, Quantum Computation: quantum computers, ChurchTuring thesis. Applications: G.1 Defining syntax of programming language. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=XzBt2W30bNtE https://www.youtube.com/watch?v=Ja9Ea93x08I https://www.youtube.com/watch?v=D633uI0CaUI https://www.youtube.com/watch?v=-06GrrmO8cg3

TEXT BOOKS:

1. Elaine Rich, Automata, Computability and Complexity, 1st Edition, Pearson education,2012/2013 2. K L P Mishra, N Chandrasekaran , 3rd Edition, Theory of Computer Science, PhI, 2012

REFERENCE BOOKS:

1. John E Hopcroft, Rajeev Motwani, Jeffery D Ullman, Introduction to AutomataTheory, Languages, and Computation, 3rd Edition, Pearson Education, 2013

2. Michael Sipser : Introduction to the Theory of Computation, 3rd edition, Cengage learning,2013

3. John C Martin, Introduction to Languages and The Theory of Computation, 3rd Edition, Tata McGraw – Hill Publishing Company Limited, 2013

4. Peter Linz, "An Introduction to Formal Languages and Automata", 3rd Edition, Narosa Publishers, 1998

Kiran G M
Staff Incharge

Prof. C. V. Shanmukhappa
HOD, CSE

Dr. Nanjundaradhya
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMAKURU - 572106

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2022- 23 (Odd Sem)

LECTURE PLAN

Semester : III (C section) Year:2022-23 → odd

Subject Title: Programming in C++	Subject Code: 21CSL382
Number of Contact Hours/Week (L:T:P:S): 1:0:0:0 Total Number of Contact Hours 15	Duration of Exam: 01 Hr.
Total exam marks: 50	Total I.A. marks: 50
Lesson plan author: Dr. Charan K V	Date: 02/11/2022
Checked by: Dr. Basavesha D	Date: 02/11/2022

Objectives:

- Understanding about object oriented programming and Gain knowledge about the capability to store information together in an object.
- Understand the capability of a class to rely upon another class and functions.
- Understand about constructors which are special type of functions.
- Create and process data in files using file I/O functions.
- Use the generic programming features of C++ including Exception handling.

Outcomes:

At the end of the course the student will be able to:

CO 1. Able to understand and design the solution to a problem using object-oriented programming concepts.
CO 2. Able to reuse the code with extensible Class types, User-defined operators and function Overloading.
CO 3. Achieve code reusability and extensibility by means of Inheritance and Polymorphism.
CO 4. Identify and explore the Performance analysis of I/O Streams.
CO 5. Implement the features of C++ including templates, exceptions and file handling for providing programmed solutions to complex problems.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
1	05/11/22	Module-1 Introduction to Object Oriented Programming: Computer programming background- C++ overview- First C++ Program -Basic C++ syntax.	Covered	
2	19/11/22	Object Oriented Programming: What is an object, Classes, methods and messages, abstraction and encapsulation, inheritance, abstract classes, polymorphism.	Covered	
3	19/11/22	Module-2 Functions in C++: Tokens – Keywords – Identifiers and constants – Operators in C++ – Scope resolution operator – Expressions and their types – Special assignment expressions – Function prototyping – Call by reference – Return by reference – Inline functions -Default arguments – Function overloading.	Covered	

4	26/11/22	Module-3 Inheritance & Polymorphism: Derived class Constructors, destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple, Hierarchical Inheritance, Hybrid Inheritance	Covered	
5	03/12/22	destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple,	Covered	
6	10/12/22	Hierarchical Inheritance, Hybrid Inheritance	Covered	
7	17/12/22	IA – 1	Conducted	
8	24/12/22	Module-4 I/O Streams: C++ Class Hierarchy- File Stream-		
9	31/12/22	Text File Handling- Binary File Handling during file operations		
10	07/01/23	Continue		
11	14/01/23	Continue		
12	21/01/23	Module-5 Exception Handling: Introduction to Exception -		
13	28/01/23	Benefits of Exception handling- Try and catch block-Throw statement- Pre-defined exceptions in C++		
14	04/01/23	IA – 2		
15	11/01/23	Revision		

Dr. Charan K V
Staff in charge

Dr. Charan K V
HOD- AI and DS

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

[CS]

LESSON PLAN (2022-23 Odd sem) MICRO SCHEDULE

SUBJECT	Analog and Digital Electronics	STAFF NAME	Dr. Charan K V
SUBJECT CODE	21CS33	SEM	III (B)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	02/11/22	TUE	Introduction	Covered	
2	03/11/22	THU	Karnaugh maps: minimum forms of switching functions, two and three variable Karnaugh maps.	Covered	
3	05/11/22	SAT	four variable karnaugh maps,	Covered	
4	08/11/22	TUE	determination of minimum expressions using essential prime implicants.	Covered	
5	09/11/22	WED	Quine-McClusky Method: determination of prime implicants,The prime implicant chart,	Covered	
6	10/11/22	THU	petricks method,	Covered	
7	12/11/22	SAT	simplification of incompletely specified functions,	Covered	
8	15/11/22	TUE	simplification using map-entered variables	Covered	
9	16/11/22	WED	Revision	Covered	
10	17/11/22	THU	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 02/11/22	TO: 17/11/22	
ACTUAL CLASSES TAKEN	FROM: 02/11/22	TO: 12/11/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
(Staff Incharge)

Dr. Basavesha D
(HoD CSE)

Dr. Narendra V G
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR-572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	19/11/22	SAT	Combinational circuit design and simulation using gates:	Covered	
12	22/11/22	TUE	Review of Combinational circuit design.	Covered	
13	23/11/22	WED	design of circuits with limited Gate Fan-in ,Gate delays and Timing diagrams.	Covered	
14	24/11/22	THU	Hazards in combinational Logic, simulation and testing of logic circuits Multiplexers.	Covered	
15	26/11/22	SAT	Decoders and Programmable Logic Devices: Multiplexers.	Covered	
16	29/11/22	THU	three state buffers,	Covered	
17	30/11/22	WED	decoders and encoders,	Covered	
18	01/12/22	THU	Programmable Logic devices, Programmable Logic Arrays, Programmable Array Logic.	Covered	
19	06/12/22	TUE	Revision	Covered	
20	07/12/22	WED	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 19/11/22	TO: 07/12/22	
ACTUAL CLASSES TAKEN	FROM: 19/11/22	TO: 07/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Dr. Basavesha D
HOD CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	08/12/22	THU	multiplexers,	Covered	
22	10/12/22	SAT	Revision	Covered	
23	13/12/22	TUE	VHDLModules	Covered	
24	14/12/22	WED	Latches and Flip-Flops:	Covered	
25	15/12/22	THU	Set Reset Latch, Gated Latches,	Covered	
26	17/12/22	SAT	Edge-Triggered D Flip Flop 1,	Covered	
27	20/12/22	TUE	SR Flip Flop, J K Flip Flop, T Flip Flop,	Covered	
28	21/12/22	WED	Flip Flop with additional inputs,	Covered	
29	22/12/22	THU	Asynchronous Sequential Circuits	Covered	
30	24/12/22	SAT	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 08/12/22	TO: 24/12/22	
ACTUAL CLASSES TAKEN	FROM: 8/12/22	TO: 24/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chaitra K V
Staff Incharge

Dr. Basavesha D
HOD CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	27/12/22	TUE	Registers and Counters:	Covered	
32	28/12/22	WED	Registers and Register Transfers, Parallel Adder with accumulator,	Covered	
33	29/12/22	THU	shift registers, design of Binary counters,	Covered	
34	31/12/22	SAT	counters for other sequences,	Covered	
35	03/01/23	TUE	counter design using SR and J K Flip Flops	Covered	
36	04/01/23	WED	Revision	Covered	
37	05/01/23	THU	Revision		
38	07/01/23	SAT	sequential parity checker,		
39	10/01/23	TUE	Revision		
40	11/01/23	WED	state tables and graphs		

SUMMARY

PLANNED DATE	FROM: 27/12/22	TO: 11/01/23	
ACTUAL CLASSES TAKEN	FROM: 27/12/22	TO: 11/01/23	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Dr. Basavesha D
HOD CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE 1					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	12/01/23	THU	Photodiodes, Light Emitting Diodes	Covered	
42	17/01/23	TUE	Optocouplers .BJT Biasing :Fixed bias ,	Covered	
43	18/01/23	WED	Collector to base Bias , voltage divider bias, Operational Amplifier Application Circuits: Multivibrators using IC-555,		
44	19/01/23	THU	Revision		
45	21/01/23	SAT	Revision		
46	24/01/23	TUE	Peak Detector, Schmitt trigger, Active Filters, Non-Linear Amplifier,		
47	25/01/23	WED	Revision		
48	26/01/23	THU	Revision		
49	28/01/23	SAT	Revision		
50	31/01/23	TUE	Relaxation Oscillator, Current-to-Voltage and Voltage-to-Current Converter ,		
51	02/02/23	THU	Revision		
54	04/02/23	SAT	Revision		
55	07/02/23	TUE	Revision		
56	08/02/23	WED	Revision		
54	09/02/23	THU	Revision		
55	11/02/23	SAT	Revision		

SUMMARY

PLANNED DATE	FROM: 17/01/23	TO: 11/02/23	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 20	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chetan K V
Staff Incharge

Dr. Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2022-23) MACROSCHEDULE →ODD 22-23

SUBJECT	Analog and Digital Electronics	STAFF NAME	Dr. Charan K V
SUBJECT CODE	21CS33	SEM/SEC	III/B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Design and analyze application of analog circuits using photo devices, timer IC, power supply and regulator IC and op-amp.
- **CO2**: Explain the basic principles of A/D and D/A conversion circuits and develop the same.
- **CO3**: Simplify digital circuits using Karnaugh Map , and Quine-McCluskey Methods
- **CO4**: Explain Gates and flip flops and make us in designing different data processing circuits, registers and counters and compare the types.
- **CO5**: Develop simple HDL programs.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	02/11/22 To 17/11/22	**Module 2** Karnaugh maps: minimum forms of switching functions, two and three variable Karnaugh maps, four variable karnaugh maps, determination of minimum expressions using essential prime implicants, Quine-McCluskey Method: determination of prime implicants, The prime implicant chart, petricks method, simplification of incompletely specified functions, simplification using map-entered variables	https://www.youtube.com/watch?v=BIAPZqGSsME&list=PLBN4rrI4BXNgZkB3O3B-O29ujIrx_O https://www.youtube.com/watch?v=GQNTBt5cKkE&list=PLr9kTqf3Lsm8wGOvNhgdwm2gkwt8CXCnd https://www.youtube.com/watch?v=mdQwiO7gEEA&list=PL-JvBqOn2Atk-1Ga3WB0am9SQ9URbENT&ww
2.	19/11/22 To 07/12/22	**Module 3** Combinational circuit design and simulation using gates: Review of Combinational circuit design, design of circuits with limited Gate Fan-in ,Gate delays and Timing diagrams, Hazards in combinational Logic, simulation and testing of logic circuits Multiplexers, Decoders and Programmable Logic Devices: Multiplexers, three state buffers, decoders and encoders, Programmable Logic devices, Programmable Logic Arrays, Programmable Array Logic.	https://www.youtube.com/watch?v=2Br2rW9rvRg https://www.youtube.com/watch?v=YAE1FsYGoiA https://www.youtube.com/watch?v=P8EvdF07S4Iw

3.	08/12/22 To 24/12/22	**Module 4** Introduction to VHDL: VHDL description of combinational circuits, VHDL Models for 08 multiplexers, VHDL Modules. Latches and Flip-Flops: Set Reset Latch, Gated Latches, Edge-Triggered D Flip Flop ,SR Flip Flop, J K Flip Flop, T Flip Flop, Flip Flop with additional inputs, Asynchronous Sequential Circuits	https://www.youtube.com/watch?v=ARvQeaI_-NY https://www.youtube.com/watch?v=fMOpX3g9NJI https://www.youtube.com/watch?v=GQNTIv5z8khE&list=PLrjkTqFjnm8wGQyNhudmm2ekoa8CXCnI
4.	27/12/22 To 11/01/23	**Module 5:** Registers and Counters: Registers and Register Transfers, Parallel Adder with accumulator, shift registers, design of Binary counters, counters for other sequences, counter design using SR and J K Flip Flops, sequential parity checker, state tables and graphs	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLjLIMtu0rE83NKbng7acXYIeA0o1dX9t https://www.youtube.com/watch?v=NB2u9IsxB8&list=PLdo5W4Nhv31aBtfE1WS4MR9LBfbm2rAQ9 https://www.youtube.com/watch?v=oNI0rf2P9gE https://www.youtube.com/watch?v=Gc4mWrmfBkw
5.	12/01/23 To 11/02/23	**MODULE-1:** Photodiodes, Light Emitting Diodes and Optocouplers ,BJT Biasing -Fixed bias ,Collector to base Bias , voltage divider bias, Operational Amplifier Application Circuits: Multivibrators using IC-555, Peak Detector, Schmitt trigger, Active Filters, Non-Linear Amplifier, Relaxation Oscillator, Current-to-Voltage and Voltage-to-Current Converter , Regulated Power Supply Parameters, adjustable voltage regulator ,D to A and A to D converter.	https://www.youtube.com/watch?v=DKChsiDBN6g https://www.youtube.com/watch?v=xFv_HH4B83A https://www.youtube.com/watch?v=Lmi378j0CuYM&list=PL8xmnXn7pVtwcQRtWxlmGA7Q6mGcNBqbv https://www.youtube.com/watch?v=3REBNPc0_Q6g https://www.youtube.com/watch?v=1EEP_xNv62k https://www.youtube.com/watch?v=P&BS9qIM8RE https://www.youtube.com/watch?v=pLmhmB6NzcM

Dr. Chetan K V
Staff Incharge

Dr. Basavesha D
HOD CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

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odd [2022-23].

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (2022-23 Odd semi MICRO SCHEDULE

SUBJECT	Analog and Digital Electronics	STAFF NAME	Dr. Charus K V
SUBJECT CODE	21CS33	SEM	III (B)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	02/11/22	TUE	Introduction	Covered	
2	03/11/22	THU	Karnaugh maps: minimum forms of switching functions, two and three variable Karnaugh maps.	Covered	
3	05/11/22	SAT	four variable karnaugh maps.	Covered	
4	08/11/22	TUE	determination of minimum expressions using essential prime implicants.	Covered	
5	09/11/22	WED	Quine-McCluskey Method: determination of prime implicants,The prime implicant chart,	Covered	
6	10/11/22	THU	petricks method,	Covered	
7	12/11/22	SAT	simplification of incompletely specified functions,	Covered	
8	15/11/22	TUE	simplification using map-entered variables	Covered	
9	16/11/22	WED	Revision	Covered	
10	17/11/22	THU	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 02/11/22	TO: 17/11/22	
ACTUAL CLASSES TAKEN	FROM: 02/11/22	TO: 18/11/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charus K V
Staff Incharge

Dr. Suhas G K
HOD ISE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	19/11/22	SAT	Combinational circuit design and simulation using gates	Covered	
12	22/11/22	TUE	Review of Combinational circuit design.	Covered	
13	23/11/22	WED	design of circuits with limited Gate Fan-in ,Gate delays and Timing diagrams.	Covered	
14	24/11/22	THU	Hazards in combinational Logic, simulation and testing of logic circuits Multiplexers.	Covered	
15	26/11/22	SAT	Decoders and Programmable Logic Devices: Multiplexers.	Covered	
16	29/11/22	THU	three state buffers,	Covered	
17	30/11/22	WED	decoders and encoders,	Covered	
18	01/12/22	THU	Programmable Logic devices, Programmable Logic Arrays, Programmable Array Logic.	Covered	
19	06/12/22	TUE	Revision	Covered	
	07/12/22	WED	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 19/11/22	TO: 07/12/22	
ACTUAL CLASSES TAKEN	FROM: 19/11/22	TO: 03/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Dr. Suhas G K
HOD ISE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	06/12/22	THU	multiplexers.	Covered	
22	10/12/22	SAT	Revision	Covered	
23	13/12/22	TUE	VHDL Modules	Covered	
24	14/12/22	WED	Latches and Flip-Flops.	Covered	
25	15/12/22	THU	Set Reset Latch, Gated Latches.	Covered	
26	17/12/22	SAT	Edge-Triggered D Flip Flop. T.	Covered	
27	20/12/22	TUE	SR Flip Flop, J-K Flip Flop, T Flip Flop.	Covered	
28	21/12/22	WED	Flip Flop with additional inputs.	Covered	
29	22/12/22	THU	Asynchronous Sequential Circuits	Covered	
30	24/12/22	SAT	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 06/12/22	TO: 24/12/22	
USC CLASSES TAKEN	FROM: 06/12/22	TO: 24/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chetan K V
Staff Incharge

Dr. Suhas G K
HOD ISE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	27/12/22	TUE	Registers and Counters	Covered	
32	28/12/22	WED	Registers and Register Transfers, Parallel Adder with accumulator,	Covered	
33	29/12/22	THU	shift registers, design of Binary counters,	Covered	
34	31/12/22	SAT	counters for other sequences,	Covered	
35	03/01/23	TUE	counter design using SR and J-K Flip Flops	Covered	
36	04/01/23	WED	Revision	Covered	
37	05/01/23	THU	Revision	Covered	
38	07/01/23	SAT	sequential parity checker,	Covered	
39	10/01/23	TUE	Revision	Covered	
40	11/01/23	WED	state tables and graphs	Covered	

SUMMARY

PLANNED DATE	FROM: 27/12/22	TO: 11/01/23	
ACTUAL CLASSES TAKEN	FROM: 27/12/22	TO: 11/01/23	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 12	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chitra K V
Staff Incharge

Dr. Suhas G K
HOD ISE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	12/01/23	THU	Photodiodes, Light Emitting Diodes	Covered	
42	17/01/23	TUE	Optocouplers, BJT Biasing: Fixed bias,	Covered	
43	18/01/23	WED	Collector to base Bias., voltage divider bias, Operational Amplifier Application Circuits: Multivibrators using IC-555,	Covered	
44	19/01/23	THU	Revision	Covered	
45	21/01/23	SAT	Revision	Covered	
46	24/01/23	TUE	Peak Detector, Schmitt trigger, Active Filters, Non-Linear Amplifier,	Covered	
47	25/01/23	WED	Revision	Covered	
48	26/01/23	THU	Revision	Covered	
49	28/01/23	SAT	Revision	Covered	
50	31/01/23	TUE	Relaxation Oscillator, Current-to-Voltage and Voltage-to-Current Converter,	Covered	
51	02/02/23	THU	Revision	Covered	
54	04/02/23	SAT	Revision	Covered	
55	07/02/23	TUE	Revision	Covered	
56	08/02/23	WED	Revision	Covered	
54	09/02/23	THU	Revision	Covered	
57	11/02/23	SAT	Revision	Covered	

SUMMARY

PLANNED DATE	FROM: 17/01/23	TO: 11/02/23	
ACTUAL CLASSES TAKEN	FROM: 17/01/23	TO: 11/02/23	
NUMBER OF CLASSES	ALLOCATED: 20	TAKEN: 20	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Dr. Suhas G R
HOD ISE

Dr. Narendra Jayaram
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (2022-23) MACROSCHEDULE

SUBJECT	Analog and Digital Electronics	STAFF NAME	Dr. Chetan K V
SUBJECT CODE	21CS33	SEM/SEC	III/B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Design and analyze applications of analog circuits using photo devices, timer IC, power supply and regulator IC and op-amp.
- **CO2**: Explain the basic principles of A/D and D/A conversion circuits and develop the same.
- **CO3**: Simplify digital circuits using Karnaugh Map , and Quine-McCluskey Methods.
- **CO4**: Explain Gates and flip flops and make use in designing different data processing circuits, registers and counters and compare the types.
- **CO5**: Develop simple HDL programs.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	02/11/22 To 17/11/22	**Module 2** Karnaugh maps: minimum forms of switching functions, two and three variable Karnaugh maps, four variable karnaugh maps, determination of minimum expressions using essential prime implicants, Quine-McCluskey Method: determination of prime implicants, The prime implicant chart, petricks method, simplification of incompletely specified functions, simplification using map-entered variables	https://www.youtube.com/watch?v=BAF2oGRM9A&list=PLZ9Xm1tkDMqdkRUYfI-O3NvqDVu_0 https://www.youtube.com/watch?v=5H2YDvSvMtA&list=PLvjKTqkUamdbwGOv5bgJbwmJgIyuuKCXC-m https://www.youtube.com/watch?v=m8UvO7q4BMc&list=PL-jDqDiJAiIc1Ga2WBBmw9YOWBkEMCWW
2.	19/11/22 To 05/12/22	**Module 3** Combinational circuit design and simulation using gates: Review of Combinational circuit design, design of circuits with limited Gate Fan-in ,Gate delays and Timing diagrams, Hazards in combinational Logic, simulation and testing of logic circuits: Multiplexers, Decoders and Programmable Logic Devices:Multiplexers, three state buffers, decoders and encoders, Programmable Logic devices, Programmable Logic Arrays, Programmable Array Logic.	https://www.youtube.com/watch?v=2fo2tW9vvRg https://www.youtube.com/watch?v=YAEIFuYGm6A https://www.youtube.com/watch?v=PlEmdY07t4w

3.	08/12/22 To 24/12/22	**Module 4** Introduction to VHDL; VHDL description of combinational circuits, VHDL Models for 08 multiplexers, VHDL Modules Latches and Flip-Flops: Set Reset Latch, Gated Latches, Edge-Triggered D Flip Flop 3.5.8 Flip Flop, J K Flip Flop, T Flip Flop, Flip Flop with additional inputs, Asynchronous Sequential Circuits	https://www.youtube.com/watch?v=ABnQxqL_NY https://www.youtube.com/watch?v=BdQp33qd9J0 https://www.youtube.com/watch?v=GQNTDv5dKME&list=PLrAXtmRdnEQy5tNsquWmxoYiGNHKQCMCa#
4.	27/12/22 To 13/01/23	**Module 5:** Registers and Counters: Registers and Register Transfers, Parallel Adder with accumulator, shift registers, design of Binary counters, counters for other sequences, counter design using SR and J K Flip Flops, sequential parity checker, state tables and graphs	https://www.youtube.com/watch?v=5dRGBueKU3M https://www.youtube.com/watch?v=5dRGBueKU3M&list=PLJLL8vbqHvBKNKbuqOucXYieA0o1d5b https://www.youtube.com/watch?v=NWuu9Ag1ue8&list=PL4bc9W4NbcUaBcfC1W5349BS9LRBmQcAQs https://www.youtube.com/watch?v=uN0nGP3qgE https://www.youtube.com/watch?v=Gc4mRvnzBaw
4.	13/01/23 To 11/02/23	**MODULE-5** Photodiodes, Light Emitting Diodes and Optocouplers ,BJT Biasing Fixed bias ,Collector to base Bias , voltage divider bias, Operational Amplifier Application Circuits: Multivibrators using IC 555, Peak Detector, Schmitt trigger, Active Filters, Non-Linear Amplifier, Relaxation Oscillator, Current-to-Voltage and Voltage-to-Current Converter ,Regulated Power Supply Parameters, adjustable voltage regulator ,D to A and A to D converter.	https://www.youtube.com/watch?v=DKChnDBfVkc https://www.youtube.com/watch?v=nFv_HSHBfJA https://www.youtube.com/watch?v=LmU7BfCvDM4&list=PLkmmNuTpYtwvQBWKzbtGAITQBtKcN3ubv https://www.youtube.com/watch?v=3BB5Pz0_Q6g https://www.youtube.com/watch?v=1EEP_vN6eCk https://www.youtube.com/watch?v=DkB9SqMBEE https://www.youtube.com/watch?v=nLmbmJWNucM

Dr. Chetan K V
Staff In-charge

Dr. Sabla G K
BOD ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

[CS]

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2022-23 Odd sem): MICROSCHEDULE

[2022-23]

SUBJECT	User Interface Design	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS734	SEM	VII (B section)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	26/09/22	MON	The User Interface-Introduction, Overview.	Covered	
2	28/09/22	WED	The importance of user interface – Defining the user interface.	Covered	
3	29/09/22	THU	The importance of Good design.	Covered	
4	01/10/22	SAT	Characteristics of graphical and web user interfaces.	Covered	
5	03/10/22	MON	Continue..	Covered	
6	06/10/22	THU	Continue..	Covered	
7	08/10/22	SAT	Principles of user interface design	Covered	
8	10/10/22	MON	Continue..	Covered	
9	12/10/22	WED	Continue..	Covered	
10	13/10/22	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 26/09/22	TO: 13/10/22	
ACTUAL CLASSES TAKEN	FROM: 26/09/22	TO: 13/10/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	15/10/22	SAT	The User Interface Design process- Obstacles	Covered	
12	17/10/22	MON	Usability	Covered	
13	20/10/22	THU	Human characteristics in Design	Covered	
14	22/10/22	SAT	Human Interaction speeds	Covered	
15	31/10/22	MON	Business functions-Business definition and requirement analysis	Covered	
16	02/11/22	WED	Continue..	Covered	
17	03/11/22	THU	Continue..	Covered	
18	05/11/22	SAT	Design standards	Covered	
19	07/11/22	MON	Continue..	Covered	
20	09/11/22	WED	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 15/10/22	TO: 09/11/22	
ACTUAL CLASSES TAKEN	FROM: 15/10/22	TO: 09/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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ENGINEERING & TECHNOLOGY
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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	10/11/22	THU	System menus and navigation schemes- Structures of menus	Covered	
22	12/11/22	SAT	Functions of menus	Covered	
23	14/11/22	MON	Contents of menus	Covered	
24	16/11/22	WED	Formatting of menus	Covered	
25	17/11/22	THU	Phrasing the menu	Covered	
26	19/11/22	SAT	Selecting menu choices	Covered	
27	21/11/22	MON	Navigating menus	Covered	
28	23/11/22	WED	Kinds of graphical menus.	Covered	
29	24/11/22	THU	Continue..	Covered	
30	26/11/22	SAT	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 10/11/22	TO:26/11/22	
ACTUAL CLASSES TAKEN	FROM: 10/11/22	TO: 26/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C.M. Shanmukeswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	28/11/22	MON	Windows - Characteristics	Covered	
32	30/11/22	WED	Components of window	Covered	
33	05/12/22	MON	Window presentation styles	Covered	
34	07/12/22	WED	Types of window	Covered	
35	08/12/22	THU	Window management	Covered	
36	10/12/22	SAT	Organizing window functions	Covered	
37	12/12/22	MON	Window operations	Covered	
38	14/12/22	WED	Webystems	Covered	
39	14/12/22	WED	Characteristics of device based controls	Covered	
40	15/12/22	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 28/11/22	TO: 15/12/22	
ACTUAL CLASSES TAKEN	FROM: 28/11/22	TO: 15/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr.Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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TUMKUR - 572 106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	17/12/22	SAT	Screen based controls- Operable control	Covered	
42	17/12/22	SAT	Text control	Covered	
43	19/12/22	MON	Selection control, Custom control	Covered	
44	19/12/22	MON	Presentation control	Covered	
45	21/12/22	WED	Windows Tests-prototypes	Covered	
46	22/12/22	THU	Continue…	Covered	
47	22/12/22	THU	Continue…	Covered	
48	24/12/22	SAT	kinds of tests.	Covered	
49	26/12/22	MON	Continue…	Covered	
50	31/12/22	SAT	Continue…	Covered	

SUMMARY

PLANNED DATE	FROM: 17/12/22	TO: 31/12/22	
ACTUAL CLASSES TAKEN	FROM: 19/12/22	TO: 31/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Prof. C V Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMAKURU-572 106

RIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2022-23) MACROSCHEDULE

SUBJECT	User Interface Design	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS734	SEM	VII (B sec)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Design the User Interface, design, menu creation, windows creation and connection between menus and windows.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	26/09/22 to 13/10/22	**Module 1** The User Interface-Introduction, Overview, The importance of user interface – Defining the user interface, The importance of Good design. Characteristics of graphical and web user interfaces, Principles of user interface design.	https://www.youtube.com/watch?v=0IAPZzG8cME&list=PLBS4rr08SKgPkBSVFI-Q2SuqTrs-D https://www.youtube.com/watch?v=GQ5YD9z5ebE&list=PLcjkFaSlamBuGQyNbqImm2gbuoBC3Cml
2.	15/10/22 to 09/11/22	**Module 2** The User Interface Design process- Obstacles, Usability, Human characteristics in Design, Human Interaction speeds, Business functions-Business definition and requirement analysis, Basic business functions, Design standards.	https://www.youtube.com/watch?v=2Rr2tW9ovRg https://www.youtube.com/watch?v=YAE1FsYGo8A
3.	10/11/22 to 26/11/22	**Module 3** System menus and navigation schemes- Structures of menus, Functions of menus, Contents of menus, Formatting of menus, Phrasing the menu, Selecting menu choices, Navigating menus, Kinds of graphical menus.	https://www.youtube.com/watch?v=ARvQeaJ_-NY https://www.youtube.com/watch?v=IMQpX3qfNJI
4.	28/11/22 to 15/12/22	**Module 4** Windows - Characteristics, Components of window, Window presentation styles, Types of window, Window management, Organizing window functions, Window operations, Web systems, Characteristics of device based controls.	https://www.youtube.com/watch?v=5dRGRueKU3M https://www.youtube.com/watch?v=5dRGRueKU3M&list=PLBULi3vhz0fL83NKbmq7acXYIeA0rIdNb

8.	17/12/22 to 31/12/22	**MODULE-5:** Screen based controls- Operable control, Text control, Selection control, Custom control, Presentation control, Windows Tests-prototypes, kinds of tests.	https://www.youtube.com/watch?v=D8ChuiDBN8c https://www.youtube.com/watch?v=uFv_HH4B83A

Dr. Charan K V
Staff Incharge

Prof. C.V. Shanmukaswamy
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
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[15]

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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (2022-23 Odd sem) MICRO SCHEDULE

[Odd sem 2022-23]

SUBJECT	User Interface Design	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS734	SEM	VII (B section)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE I					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	26/09/22	MON	The User Interface-Introduction, Overview.	Covered	
2	28/09/22	WED	The importance of user interface – Defining the user interface.	Covered	
3	29/09/22	THU	The importance of Good design.	Covered	
4	01/10/22	SAT	Characteristics of graphical and web user interfaces.	Covered	
5	03/10/22	MON	Continue..	Covered	
6	06/10/22	THU	Continue..	Covered	
7	08/10/22	SAT	Principles of user interface design	Covered	
8	10/10/22	MON	Continue..	Covered	
9	12/10/22	WED	Continue..	Covered	
10	13/10/22	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 26/09/22	TO: 13/10/22	
ACTUAL CLASSES TAKEN	FROM: 26/09/22	TO: 13/10/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE II					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	15/10/22	SAT	The User Interface Design process- Obstacles	Covered	
12	17/10/22	MON	Usability	Covered	
13	20/10/22	THU	Human characteristics in Design	Covered	
14	22/10/22	SAT	Human Interaction speeds	Covered	
15	31/10/22	MON	Business functions-Business definition and requirement analysis	Covered	
16	02/11/22	WED	Continue..	Covered	
17	03/11/22	THU	Continue..	Covered	
18	05/11/22	SAT	Design standards	Covered	
19	07/11/22	MON	Continue..	Covered	
20	09/11/22	WED	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 15/10/22	TO: 09/11/22	
ACTUAL CLASSES TAKEN	FROM: 15/10/22	TO: 09/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	10/11/22	THU	System menus and navigation schemes- Structures of menus	Covered	
22	12/11/22	SAT	Functions of menus	Covered	
23	14/11/22	MON	Contents of menus	Covered	
24	16/11/22	WED	Formatting of menus	Covered	
25	17/11/22	THU	Phrasing the menu	Covered	
26	19/11/22	SAT	Selecting menu choices	Covered	
27	21/11/22	MON	Navigating menus	Covered	
28	23/11/22	WED	Kinds of graphical menus.	Covered	
29	24/11/22	THU	Continue..	Covered	
30	26/11/22	SAT	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 10/11/22	TO: 26/11/22	
ACTUAL CLASSES TAKEN	FROM: 10/11/22	TO: 26/11/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K.V
Staff Incharge

Dr. Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	28/11/22	MON	Windows - Characteristics	Covered	
32	30/11/22	WED	Components of window	Covered	
33	05/12/22	MON	Window presentation styles	Covered	
34	07/12/22	WED	Types of window	Covered	
35	08/12/22	THU	Window management	Covered	
36	10/12/22	SAT	Organizing window functions	Covered	
37	12/12/22	MON	Window operations	Covered	
38	14/12/22	WED	Web systems	Covered	
39	14/12/22	WED	Characteristics of device based controls	Covered	
40	15/12/22	THU	Continue..	Covered	

SUMMARY

PLANNED DATE	FROM: 28/11/22	TO: 15/12/22	
ACTUAL CLASSES TAKEN	FROM: 28/11/22	TO: 15/12/22	
NUMBER OF CLASSES	ALLOCATED: 12	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Charan K V
Staff Incharge

Dr. Suha G K
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	17/12/22	SAT	Screen based controls: Operable control	Covered	
42	17/12/22	SAT	Text control	Covered	
43	19/12/22	MON	Selection control, Custom control	Covered	
44	19/12/22	MON	Presentation control	Covered	
45	21/12/22	WED	Windows Tests-prototypes	Covered	
46	22/12/22	THU	Continue	Covered	
47	22/12/22	THU	Continue...		
48	24/12/22	SAT	kinds of tests.		
49	26/12/22	MON	Continue...		
50	31/12/22	SAT	Continue...		

SUMMARY

PLANNED DATE	FROM: 17/12/22	TO: 31/12/22	
ACTUAL CLASSES TAKEN	FROM: 17/12/22	TO: 31/12/22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Dr. Chann K V
Staff Incharge

Dr. Suha G K
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
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TUMKUR - 572106

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SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (2022-23) MACROSCHEDULE

SUBJECT	User Interface Design	STAFF NAME	Dr. Charan K V
SUBJECT CODE	18CS734	SEM	VII (B sec)
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or COs

- **CO1**: Design the User Interface, design, menu creation, windows creation and connection between menus and windows.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	26/09/22 to 14/10/22	**Module 1** The User Interface-Introduction, Overview, The importance of user interface – Defining the user interface, The importance of Good design, Characteristics of graphical and web user interfaces, Principles of user interface design.	https://www.youtube.com/watch?v=9IAPZeG2bME&list=PLDN4rrl48XKpZkf03iYFl-O29szjTrs_O https://www.youtube.com/watch?v=GQNTBv5cKbE&list=PLrjkTqUjmm8wGOz5Hg4mmd2gkoa0CXCml
2.	15/10/22 to 19/10/22	**Module 2** The User Interface Design process- Obstacles, Usability, Human characteristics in Design, Human Interaction speeds, Business functions- Business definition and requirement analysis, Basic business functions, Design standards.	https://www.youtube.com/watch?v=2Rr2tW9z9Rg https://www.youtube.com/watch?v=YAE1FsYGotA
3.	19/10/22 to 24/10/22	**Module 3** System menus and navigation schemes- Structures of menus, Function of menus, Contents of menus, Formatting of menus, Phrasing the menu, Selecting menu choices, Navigating menus, Kinds of graphical menus.	https://www.youtube.com/watch?v=ARvQeqJ_-NY https://www.youtube.com/watch?v=8t0pX3q0NJI
4.	26/10/22 to 15/11/22	**Module 4** Windows - Characteristics, Components of window, Window presentation styles, Types of window, Window management, Organizing window functions, Window operations, Web systems, Characteristics of device based controls.	https://www.youtube.com/watch?v=5dRGRucKU3M https://www.youtube.com/watch?v=5dRGRucKU3M&list=PLfUL0hsh0rF83NKhng7acXYIcA0e1dXh

5.	12/12/22 to 31/12/22	**MODULE-5:** Screen based controls- Operable control, Text control, Selection control, Custom control, Presentation control, Windows Tests-prototypes, kinds of tests.	https://www.youtube.com/watch?v=D8ChsIQBN6c https://www.youtube.com/watch?v=sFx-1I4B83A

Dr. Charan K V
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMAKUR - 572106

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DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2022 -JANUARY2023) MICROSCHEDULE

ODD-22-23

SUBJECT	MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY	STAFF NAME	Mr. SUTHAN R
SUBJECT CODE	18CS51	SEM/SEC	V
IA Marks (CIE)	40(Average of three tests for 30marks and 10marks for assignment)	Maximum Exam Marks (SEE)	60(Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)

MODULE 1

ASL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	10/10/2022	MON	**Module 1: Introduction** :- Meaning, Nature and characteristics of Management	Covered	
2	11/10/2022	TUE	Scope and functional areas of management,	Covered	
3	12/10/2022	WED	Goals of Management, Levels of Management	Covered	
4	13/10/2022	THU	brief overview of evolution of management theories	covered	
5	17/10/2022	MON	Planning- Nature, importance,	covered	
6	18/10/2022	TUE	types of plans, steps in planning,	Covered	
7	19/10/2022	WED	Organizing- nature and purpose,	covered	
8	20/10/2022	THU	types of Organization,	covered	
9	25/10/2022	TUE	types of Organization continued…	covered	
10	27/10/2022	THU	Staffing- meaning, process of recruitment and selection	covered	

SUMMARY

PLANNED DATE	FROM: 10.10.2022	TO:27.10.2022	
ACTUAL CLASSES TAKEN	FROM: 10-10-22	TO: 27-10-22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suthan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	31/10/2022	MON	**Module 2: Directing and controlling-** meaning and nature of directing	Covered	
12	01/11/2022	TUE	leadership styles	Covered	
13	02/11/2022	WED	leadership styles conti….	Covered	
14	03/11/2022	THU	motivation Theories.	Covered	
15	07/11/2022	MON	Communication- Meaning and importance.	Covered	
16	08/11/2022	TUE	Communication- Meaning and importance continued….	Covered	
17	09/11/2022	WED	Coordination meaning and importance.	Covered	
18	15/11/2022	TUE	Coordination meaning and importance continued…..	Covered	
19	16/11/2022	WED	Controlling- meaning.	Covered	
20	17/11/2022	THU	steps in controlling, methods of establishing control	Covered	

SUMMARY

PLANNED DATE	FROM: 31.10.2022	TO: 17.11.2022	
ACTUAL CLASSES TAKEN	FROM: 31.10.22.	TO: 17.11.22.	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	21/11/2022	MON	**Module 3:** **Entrepreneur** – meaning of entrepreneur,	Covered	
22	22/11/2022	TUE	characteristics of entrepreneurs,	Covered	
23	23/11/2022	WED	classification and types of entrepreneurs,	Covered	
24	24/11/2022	THU	various stages in entrepreneurial process,	Covered	
25	28/11/2022	MON	role of entrepreneurs in economic development,	Covered	
26	29/11/2022	TUE	Entrepreneurship in India and barriers to entrepreneurship	Covered	
27	30/11/2022	WED	Identification of business opportunities,	Covered	
28	01/12/2022	THU	market feasibility study,	Covered	
29	05/12/2022	MON	technical feasibility stud, financial feasibility study and social feasibility study	Covered	
30	06/12/2022	TUE	financial feasibility study and social feasibility study continued.....	Covered	

SUMMARY

PLANNED DATE	FROM: 21.11.2022	TO-06.12.2022	
ACTUAL CLASSES TAKEN	FROM:	TO:	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suhas R
Staff Incharge

Dr. Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	07/12/2022	WED	**Module 4: Preparation of project and ERP** - meaning of project,	Covered	
32	08/12/2022	THU	project identification,	Covered	
33	12/12/2022	MON	project selection,	Covered	
34	13/12/2022	TUE	project report, need and significance of project report,	Covered	
35	14/12/2022	WED	contents, formulation,	Covered	
36	15/12/2022	THU	guidelines by planning commission for project report,	Covered	
37	20/12/2022	TUE	**Enterprise Resource Planning: Meaning and Importance- ERP**	Covered	
38	21/12/2022	WED	**ERP and Functional areas of Management**	Covered	
39	22/12/2022	THU	Marketing / Sales- Supply Chain Management, Finance and Accounting	Covered	
40	26/12/2022	MON	Human Resources – Types of reports and methods of report generation	Covered	

SUMMARY

PLANNED DATE	**FROM: 07.12.2022**	**TO: 26.12.2022**	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ~~(Dec)~~	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Suthan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE V					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	27/12/22	TUE	**Module 5:** **Micro and Small Enterprises:** Definition of micro and small enterprises,:	Covered	
42	28/12/22	WED	characteristics and advantages of micro and small enterprises,	Covered	
43	02/01/23	MON	steps in establishing micro and small enterprises,	Covered	
44	03/01/23	TUE	Government of India indusial policy 2007 on micro and small enterprises,	Covered	
45	04/01/23	WED	case study (Microsoft), Case study(Captain G R Gopinath)	Covered	
46	09/01/23	MON	Case study (N R Narayana Murthy & Infosys).	Covered	
47	23/01/23	MON	**Institutional support:** MSME-DI, NSIC,	Covered	
48	24/01/23	TUE	SIDBI, KIADB, KSSIDC, TECSOK, KSFC,	Covered	
49	25/01/23	WED	DIC and District level single window agency,	Covered	
50	26/01/23	THU	**Introduction to IPR.** Patent acts and rules...Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 27.12.2022	TO: 26.01.2023	
ACTUAL CLASSES TAKEN	FROM: 27.12.22	TO: 26.01.23	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suthan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

odd-22-23

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2022 - JANUARY2023) MACROSCHEDULE

SUBJECT	**MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS51**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)**

Course Outcomes or COs

CO1: Define management, organization, entrepreneur, planning ERP and outline their importance in entrepreneurship.

CO2: Utilize the resources available effectively through ERP.

CO3: Make use of IRPs and Institutional support in entrepreneurship.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	10.10.2022 to 27.10.2022	**Module- 1** Meaning, nature and characteristics of management, scope and Functional areas of management, goals of management, levels of management, brief overview of evolution of management theories, Planning- Nature, importance, types of plans, steps in planning. Organizing- nature and purpose, types of Organization, Staffing- meaning, process of recruitment and selection. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=WUXAbnwIUek&t=1s&ab_channel=NPTEL https://www.youtube.com/watch?v=BNDpXhEY2w8&list=PLeo1K3hjS3uu8azpeb8VzwfP4Qo_nInBC https://www.youtube.com/watch?v=AMLIJw1MAIw&list=PLeo1K3hjS3uu8azpeb8VzwfP4Qo_nInBC&index=8 https://www.youtube.com/watch?v=AMLIJw1MAIw&list=PLeo1K3hjS3uu8azpeb8VzwfP4Qo_nInBC&index=8

2.	31.10.2022 to 17.11.2022	**Module -2** Directing and controlling- meaning and nature of directing, leadership styles, motivation Theories, Communication- Meaning and importance, Coordination- meaning and importance, Controlling- meaning, steps in controlling, methods of establishing control. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=hIYZPwHgA8&list=PLxxsJzpxvWXMf_bd9dVrxdWGiwdUsk/mdx=2 https://www.youtube.com/watch?v=8MsWXH68wE&list=PLxxsJzpxvWXMf_bd9dVrxdWGiwdUsk/mdx=4 https://www.youtube.com/watch?v=8MsGwbwlwc0/9&list=PLxxsJzpxvWXMf_bd9dVrxdWGiwdUsk/mdx=10 https://www.youtube.com/watch?v=8MsbeyEBwc&list=PLxxsJzpxvWXMf_bd9dVrxdWGiwdUsk/mdx=11
3.	21.11.2022 to 06.12.2022	**Module -3** Entrepreneur – meaning of entrepreneur, characteristics of entrepreneurs, classification and types of entrepreneurs, various stages in entrepreneurial process, role of entrepreneurs in economic development, entrepreneurship in India and barriers to entrepreneurship. Identification of business opportunities, market feasibility study, technical feasibility study, financial feasibility study and social feasibility study. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP346yoeQ0k https://www.youtube.com/watch?v=SwyLCE-U44g https://www.youtube.com/watch?v=XJ1bsla2l10 https://www.gnan.com.ac.in/web/images/optimizing-the-impact-of-change-key-strategies-for-success-in-it-projects-pdfs/2295.pdf https://bn.bb.google.co.in/books?hl=en&lr=&id=JdPT3wAAQBAJ&oi=fnd&pg=PT2&dq=Application+Protocol+Interface+and+Architecture&ots=L4rbC3F42k&sig=s_gv3Q0rvqYI=#v=onepage&q&f=false

4.	07.12.2022 to 26.12.2022	**Module -4** Preparation of project and ERP - meaning of project, project identification, project selection, project report, need and significance of project report, contents,formulation, guidelines by planning commission for project report, Enterprise Resource Planning: Meaning and Importance- ERP and Functional areas of Management – Marketing / Sales- Supply Chain Management – Finance and Accounting – Human Resources – Types of reports and methods of report generation. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=Ln-N2fdOfM&list=PLBwF0kL6WN7Mnd0mlqDbn0x_zbvG-fG1t https://www.youtube.com/watch?v=VGf5n1C3lIY https://www.youtube.com/watch?v=BBMSJTHCdwA&list=PLJaGz4BUwrB2n87mDCfDmfzfA7AWz8Vj https://www.classmate.com/site/document/chapter2/8867&sectname=4
5.	27.12.2022 to 26.01.2023	**Module -5** Micro and Small Enterprises: Definition of micro and small enterprises, characteristics and advantages of micro and small enterprises, steps in establishing micro and small enterprises, Government of India indusial policy 2007 on micro and small enterprises, case study (Microsoft), Case study(Captain G R Gopinath),case study (N R Narayana Murthy & Infosys), Institutional support: MSME-DI, NSIC, SIDBI, KIADB, KSSIDC, TECSOK, KSFC, DIC and District level single window agency. Introduction to IPR. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=AvBSW1T_Qvs&list=PLxwuZg9-9WXMf_ln5pMvvjfb4Tjmf4-i&index=17 https://www.youtube.com/watch?v=8f9QBAn3Ik2w&list=PLxwuZg9-9WXMf_ln5pMvvjfb4Tjmf4-i&index=18 https://www.youtube.com/watch?v=fIqKnk2Vnbk&list=PLxwuZg9-9WXMf_ln5pMvvjfb4Tjmf4-i&index=22 https://www.youtube.com/watch?v=2ASMCInJBQ8&list=PLxwuZg9-9WXMf_ln5pMvvjfb4Tjmf4-i&index=24 https://www.youtube.com/watch?v=0N3bxBUuZWM&list=PLxwuZg9-9WXMf_ln5pMvvjfb4Tjmf4-i&index=26

Mr. Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

odd 22-23 (CS)

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2022 -JANUARY2023) MICROSCHEDULE

SUBJECT	**MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS51**	**SEM/SEC**	V
IA Marks (CIE)	**40(Average of three tests for 30marks and 10marks for assignment)**	**Maximum Exam Marks (SEE)**	**60(Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)**

MODULE 1

ASL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	10/10/2022	MON	**Module 1: Introduction** :: Meaning, Nature and characteristics of Management	Covered	
2	11/10/2022	TUE	Scope and functional areas of management,	Covered	
3	12/10/2022	WED	Goals of Management, Levels of Management	Covered	
4	13/10/2022	THU	brief overview of evolution of management theories	Covered	
5	17/10/2022	MON	Planning- Nature, importance,	Covered	
6	18/10/2022	TUE	types of plans, steps in planning,	Covered	
7	19/10/2022	WED	Organizing- nature and purpose,	Covered	
8	20/10/2022	THU	types of Organization,	Covered	
9	25/10/2022	TUE	types of Organization continued…	Covered	
10	27/10/2022	THU	Staffing- meaning, process of recruitment and selection	Covered	

SUMMARY

PLANNED DATE	**FROM: 10.10.2022**	**TO:27.10.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 10.10.22	**TO:** 27.10.22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Suthan R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	31/10/2022	MON	**Module 2: Directing and controlling**-meaning and nature of directing	covered	
12	01/11/2022	TUE	leadership styles	covered	
13	02/11/2022	WED	leadership styles conti....	covered	
14	03/11/2022	THU	motivation Theories,	covered	
15	07/11/2022	MON	Communication- Meaning and importance,	covered	
16	08/11/2022	TUE	Communication- Meaning and importance continued.....	covered	
17	09/11/2022	WED	Coordination meaning and importance,	covered	
18	15/11/2022	TUE	Coordination meaning and importance continued.....	covered	
19	16/11/2022	WED	Controlling- meaning,	covered	
20	17/11/2022	THU	steps in controlling, methods of establishing control	covered	

SUMMARY

PLANNED DATE	FROM: 31.10.2022	TO: 17.11.2022	
ACTUAL CLASSES TAKEN	FROM: 31.10.22	TO: 17.11.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suhan R.
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	21/11/2022	MON	**Module 3:** **Entrepreneur** – meaning of entrepreneur,	Covered	
22	22/11/2022	TUE	characteristics of entrepreneurs,	Covered	
23	23/11/2022	WED	classification and types of entrepreneurs,	Covered	
24	24/11/2022	THU	various stages in entrepreneurial process,	Covered	
25	28/11/2022	MON	role of entrepreneurs in economic development,	Covered	
26	29/11/2022	TUE	Entrepreneurship in India and barriers to entrepreneurship.	Covered	
27	30/11/2022	WED	Identification of business opportunities,	Covered	
28	01/12/2022	THU	market feasibility study,	Covered	
29	05/12/2022	MON	technical feasibility stud,financial feasibility study and social feasibility study	Covered	
30	06/12/2022	TUE	financial feasibility study and social feasibility study continued.....	Covered	

SUMMARY

PLANNED DATE	FROM: 21.11.2022	TO:06.12.2022	
ACTUAL CLASSES TAKEN	FROM: 21.11.22	TO: 06.12.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suhan R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572105

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	07/12/2022	WED	**Module 4:** **Preparation of project and ERP** - meaning of project,	Covered	
32	08/12/2022	THU	project identification,	Covered	
33	12/12/2022	MON	project selection,	Covered	
34	13/12/2022	TUE	project report, need and significance of project report,	Covered	
35	14/12/2022	WED	contents, formulation,	Covered	
36	15/12/2022	THU	guidelines by planning commission for project report,	Covered	
37	20/12/2022	TUE	**Enterprise Resource Planning: Meaning and Importance- ERP**	Covered	
38	21/12/2022	WED	ERP and Functional areas of Management	Covered	
39	22/12/2022	THU	Marketing / Sales- Supply Chain Management, Finance and Accounting	Covered	
40	26/12/2022	MON	Human Resources – Types of reports and methods of report generation	Covered	

SUMMARY

PLANNED DATE	**FROM: 07.12.2022**	**TO: 26.12.2022**	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:** ✓ (10 2)	IA 3: ✓ (6 1)
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Suhas R
Staff Incharge

Dr Ramvesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHREE VENKATESHWARA INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMAKURU - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	27/12/22	TUE	**Module 5:** **Micro and Small Enterprises:** Definition of micro and small enterprises,:	Covered	
42	28/12/22	WED	characteristics and advantages of micro and small enterprises,	Covered	
43	02/01/23	MON	steps in establishing micro and small enterprises,	Covered	
44	03/01/23	TUE	Government of India indusial policy 2007 on micro and small enterprises,	Covered	
45	04/01/23	WED	case study (Microsoft), Case study(Captain G R Gopinath)	Covered	
46	09/01/23	MON	Case study (N R Narayana Murthy & Infosys),	Covered	
47	23/01/23	MON	**Institutional support:** MSME-DI, NSIC,	Covered	
48	24/01/23	TUE	SIDBI, KIADB, KSSIDC, TECSOK, KSFC,	Covered	
49	25/01/23	WED	DIC and District level single window agency,	Covered	
50	26/01/23	THU	**Introduction to IPR**Patent acts and rules...Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 27.12.2022**	**TO: 26.01.2023**	
ACTUAL CLASSES TAKEN	**FROM:** 27.12.22	**TO:** 26.01.23	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Suthan R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Nagaraja G S
PRINCIPAL
SRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

odd-21-22

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SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCTOBER 2022 - JANUARY2023) MACROSCHEDULE

SUBJECT	**MANAGEMENT AND ENTREPRENEURSHIP FOR IT INDUSTRY**	**STAFF NAME**	**Mr. SUTHAN R**
SUBJECT CODE	**18CS51**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60 marks)**

Course Outcomes or COs

CO1: Define management, organization, entrepreneur, planning ERP and outline their importance in entrepreneurship.

CO2: Utilize the resources available effectively through ERP.

CO3: Make use of IRPs and institutional support in entrepreneurship.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	10.10.2022 to 27.10.2022	**Module- 1** Meaning, nature and characteristics of management, scope and Functional areas of management, goals of management, levels of management, brief overview of evolution of management theories, Planning- Nature, importance, types of plans, steps in planning. Organizing- nature and purpose, types of Organization, Staffing- meaning, process of recruitment and selection. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=WUYAIaswiI34&list=PLaxiGgvPWXMF_bSpSUcsBM1jzwB4J https://www.youtube.com/watch?v=BXIPaYhIEY2w&list=PLaxiGgvPWXMF_bSpSUcsBM1jzwB4J&index=2 https://www.youtube.com/watch?v=AYMD_IDwUM&list=PLaxiGgvPWXMF_bSpSUcsBM1jzwB4J&index=3 https://www.youtube.com/watch?v=AYMD_IDwUM&list=PLaxiGgvPWXMF_bSpSUcsBM1jzwB4J&index=4

2.	31.10.2022 to 17.11.2022	**Module -2** Directing and controlling- meaning and nature of directing, leadership styles, motivation Theories, Communication- Meaning and importance, Coordination- meaning and importance, Controlling- meaning, steps in controlling, methods of establishing control. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=q3YEZPe0gAI&list=PLxxsJcwSWXMF_bdYbYxxjB9Sjw49-5k1&index=3 https://www.youtube.com/watch?v=9XqOXB6bvU&list=PLxxsJcwSWXMF_bdYbYxxjB9Sjw49-5k1&index=4 https://www.youtube.com/watch?v=B6iGmbwbeE0&list=PLxxsJcwSWXMF_bdYbYxxjB9Sjw49-5k1&index=10 https://www.youtube.com/watch?v=BY1bn6DwLoI&list=PLxxsJcwSWXMF_bdYbYxxjB9Sjw49-5k1&index=10
3.	21.11.2022 to 06.12.2022	**Module -3** Entrepreneur – meaning of entrepreneur, characteristics of entrepreneurs, classification and types of entrepreneurs, various stages in entrepreneurial process, role of entrepreneurs in economic development, entrepreneurship in India and barriers to entrepreneurship. Identification of business opportunities, market feasibility study, technical feasibility study, financial feasibility study and social feasibility study. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=aP24fvzoOC8 https://www.youtube.com/watch?v=SwvLCI-U44c https://www.youtube.com/watch?v=XHNrla2f20 https://www.cognizant.com/whitepapers/optimizing-the-internet-of-things-key-strategies-for-communication-interoperability.pdf https://books.google.co.in/books?hl=en&lr=&id=OdPTDwAAQBAJ&oi=fnd&pg=PT17&dq=Application+Protocols+for+IoT+speed&ots=gUuIsvDC3&sig=L4ybCkF42NUE-z_gvnZ8GfvqYI=#v=onepage&q&f=false

4.	07.12.2022 to 26.12.2022	**Module -4** Preparation of project and ERP - meaning of project, project identification, project selection, project report, need and significance of project report, contents,formulation, guidelines by planning commission for project report, Enterprise Resource Planning: Meaning and Importance- ERP and Functional areas of Management – Marketing / Sales- Supply Chain Management – Finance and Accounting – Human Resources – Types of reports and methods of report generation. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=LeNZ6iOfeS8&list=PLffwt1tKLm9iNMmOBnfpQwOx_abvGJG4 https://www.youtube.com/watch?v=YOI5uIC8lY https://www.youtube.com/watch?v=BkMSDTHOhwA&list=PLJnG-4IBxwI0n82wZCDnnfuh7J9OJSY https://www.slideserve.com/archivekarandh.anu?c=289367&res%ser=1
5.	27.12.2022 to 26.01.2023	**Module -5** Micro and Small Enterprises: Definition of micro and small enterprises, characteristics and advantages of micro and small enterprises, steps in establishing micro and small enterprises, Government of India industial policy 2007 on micro and small enterprises, case study (Microsoft), Case study(Captain G R Gopinath),case study (N R Narayana Murthy & Infosys), Institutional support: MSME-DI, NSIC, SIDBI, KIADB, KSSIDC, TECSOK, KSFC, DIC and District level single window agency, Introduction to IPR. **No. of Contact Sessions: 12**	https://www.youtube.com/watch?v=AvrffXW1T_Q&vl&list=PLanu2g0-9WXMC_inSpMvxjfH43anfk-i&index=17 https://www.youtube.com/watch?v=H9QEAnPJs2w&list=PLanu2g0-9WXMC_inSpMvxjfH43anfk-i&index=18 https://www.youtube.com/watch?v=IlqKuh2YmIo&list=PLanu2gn-9WXMC_inSpMvxjfH43anfk-i&index=22 https://www.youtube.com/watch?v=x7AKMLHnHfo&list=PLanu2gn-9WXMC_inSpMvxjfH43anfk-i&index=28 https://www.youtube.com/watch?v=6WnfL0jOWNM&list=PLanu2gn-9WXMC_inSpMvxjfH43anfk-i&index=26

Mr. Suhas R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Na[illegible]
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

Odd - 22-23 (VII) - CS

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEP -DEC 2022) MICROSCHEDULE

SUBJECT	Cryptography	STAFF NAME	SUTHAN R
SUBJECT CODE	18CS744	SEM/SEC	VII-B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	26/09/22	MON	**Classical Encryption Techniques** Symmetric Cipher Model, Cryptography, Cryptanalysis and Brute-Force Attack	Covered	
2	29/09/22	THU	Substitution Techniques, Caesar Cipher, Monoalphabetic Cipher, Playfair Cipher, Hill Cipher	Covered	
3	29/09/22	THU	Polyalphabetic Cipher, One Time Pad. **Block Ciphers and the data encryption standard:** Traditional block Cipher structure	Covered	
4	30/09/22	FRI	stream Ciphers and block Ciphers, Motivation for the feistel Cipher structure, the feistel Cipher	Covered	
5	03/10/22	MON	The data encryption standard, DES encryption, DES decryption, A DES example	Covered	
6	06/10/22	THU	The avalanche effect, the strength of DES, the use of 56-bit Keys	Covered	
7	06/10/22	THU	the nature of the DES algorithm, timing attacks	Covered	
8	07/10/22	FRI	Block cipher design principles	Covered	
9	10/10/22	MON	number of rounds, design of function F, key schedule algorithm	Covered	
10	13/10/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 26.09.2022	TO: 13.10.2022	
ACTUAL CLASSES TAKEN	FROM: 26.09.22	TO: 13.10.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suthan R

Dr Basavesha D

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	13/10/22	THU	**Public-Key Cryptography and RSA:** Principles of public-key cryptosystems. Public-key cryptosystems	Covered	
12	14/10/22	FRI	Applications for public-key cryptosystems, requirements for public-key cryptosystems	Covered	
13	17/10/22	MON	public-key cryptanalysis. The RSA algorithm	Covered	
14	20/10/22	THU	description of the algorithm, computational aspects, the security of RSA	Covered	
15	20/10/22	THU	**Other Public-Key Cryptosystems:** Diffie-hellman key exchange,	Covered	
16	21/10/22	FRI	The algorithm, key exchange protocols	Covered	
17	31/10/22	MON	The algorithm, key exchange protocols	Covered	
18	03/11/22	THU	Elgamal Cryptographic systems	Covered	
19	03/11/22	THU	Elgamal Cryptographic systems cont...	Covered	
20	04/11/22	FRI	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 13.10.2022	TO: 04.11.2022	
ACTUAL CLASSES TAKEN	FROM: 13.10.22	TO: 04.11.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suthan R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	07/11/22	MON	Elliptic curve arithmetic, abelian groups, elliptic curves over real numbers, elliptic curves over Zp	Covered	
22	10/11/22	THU	elliptic curves overGP(2m), Elliptic curve cryptography, Analog of Diffie-hellman key exchange,	Covered	
23	10/11/22	THU	Elliptic curve encryption/ decryption, security of Elliptic curve cryptography	Covered	
24	14/11/22	MON	Pseudorandom number generation based on an asymmetric cipher	Covered	
25	17/11/22	THU	PRNG based on RSA	Covered	
26	17/11/22	THU	**Key Management and Distribution:** Symmetric key distribution using Symmetric encryption, A key distribution scenario	Covered	
27	18/11/22	FRI	Hierarchical key control, session key lifetime, a transparent key control scheme, Decentralized key control	Covered	
28	21/11/22	MON	controlling key usage, Symmetric key distribution using asymmetric encryption, simple secret key distribution	Covered	
29	24/11/22	THU	secret key distribution with confidentiality and authentication, A hybrid scheme, distribution of public keys,	Covered	
30	24/11/22	THU	public announcement of public keys, publicly available directory Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 07.11.2022	TO:24.11.2022	
ACTUAL CLASSES TAKEN	FROM: 07.11.22	TO: 24.11.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suthan R
Staff Incharge

Dr Balavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572105

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	25/11/22	FRI	X-509 certificates. Certificates, X-509 version 3, public key infrastructure	Covered	
32	28/11/22	MON	**User Authentication:** Remote user Authentication principles, Mutual Authentication,	Covered	
33	28/12/22	MON	one wayAuthentication, remote user Authentication using Symmetric encryption	Covered	EXTRA
34	05/12/22	MON	Mutual Authentication, one way Authentication, Kerberos, Motivation , Kerberos version 4	Covered	
35	05/12/22	MON	Kerberos version 5, Remote user Authentication using Asymmetric encryption, Mutual Authentication, one way Authentication	Covered	EXTRA
36	08/12/22	THU	**Electronic Mail Security:** Pretty good privacy, notation, operational; description, S/MIME, RFC5322, Multipurpose internet mail extensions	Covered	
37	08/12/22	THU	S/MIME functionality, S/MIME messages, S/MIME certificate processing, enhanced security services	Covered	
38	09/12/22	FRI	Domain keys identified mail, internet mail architecture, E-Mail threats	Covered	
39	12/12/22	MON	DKIM strategy, DKIM functional flow	Covered	
40	12/12/22	MON	Question paper discussion	Covered	EXTRA

SUMMARY

PLANNED DATE	FROM: 25.11.2022	TO: 12.12.2022	
ACTUAL CLASSES TAKEN	FROM: 25.11.22	TO: 12.12.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓ (60%)	IA 3: ✓ (30%)
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suthan R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	15/12/22	THU	**IP Security:** IP Security overview, applications of IPsec, benefits of IPsec, Routing applications	Covered	
42	15/12/22	THU	IPsec documents, IPsec services, transport and tunnel modes, IP Security policy, Security associations	Covered	
43	16/12/22	FRI	Security associations database, Security policy database, IP traffic processing, Encapsulating Security payload	Covered	
44	19/12/22	MON	ESP format, encryption and authentication algorithms, Padding, Anti replay service	Covered	
45	19/12/22	MON	**Transport and tunnel modes**, combining security associations, authentication plus confidentiality,	Covered	EXTRA
46	22/12/22	THU	**Transport and tunnel modes**, combining security associations, authentication plus confidentiality,	Covered	
47	22/12/22	THU	basic combinations of security associations, internet key exchange	Covered	
48	23/12/22	FRI	key determinations protocol	Covered	
49	23/12/22	FRI	header and payload formats, cryptographic suits.	Covered	EXTRA
50	26/12/22	MON	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 15.12.2022	TO: 26.12.2022	
ACTUAL CLASSES TAKEN	FROM: 15.12.22	TO: 26.12.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3: ✓
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Sathas R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMAKURU - 572106.

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SHREEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (SEP -DEC 2022) MACROSCHEDULE

SUBJECT	Cryptography	STAFF NAME	SUTHAN R
SUBJECT CODE	18CS744	SEM/SEC	VII-B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Define cryptography and its principles
- Explain Cryptography algorithms
- Illustrate Public and Private key cryptography
- Explain Key management, distribution and certification
- Explain authentication protocols

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	26.09.2022 to 13.10.2022	**Module- 1:Introduction** **Classical Encryption Techniques** Symmetric Cipher Model, Cryptography, Cryptanalysis and Brute-Force Attack, Substitution Techniques, Caesar Cipher, Monoalphabetic Cipher, Playfair Cipher, Hill Cipher, Polyalphabetic Cipher, One Time Pad. **Block Ciphers and the data encryption standard:** Traditional block Cipher structure, stream Ciphers and block Ciphers, Motivation for the feistel Cipher structure, the feistel Cipher, The data encryption standard, DES encryption, DES decryption, A DES example, results, the avalanche effect, the strength of DES, the use of 56-Bit Keys, the nature of the DES algorithm, timing attacks, Block cipher design principles, number of rounds, design of function F, key schedule algorithm **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=J99-8dzgI6o https://www.youtube.com/watch?v=J99-8dzgI6o&list=PLBCM1D2hcH8UCMvfOY7i1B9KzGFLLLLLL&index=2 https://www.youtube.com/watch?v=IhOPzGA3ts
2	13.10.2022 to 04.11.2022	**Module -2** **Public-Key Cryptography and RSA:** Principles of public-key cryptosystems. Public-key cryptosystems. Applications for public-key cryptosystems, requirements for public-key cryptosystems. public-key cryptanalysis. The RSA algorithm, description of the algorithm, computational aspects, the security of RSA. **Other Public-Key Cryptosystems:** Diffie-hellman key exchange, The algorithm, key exchange protocols, man in the middle attack.Elgamal Cryptographic systems **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=HQAHHHHHM https://www.youtube.com/watch?v=wwbvMMMHbs https://www.youtube.com/watch?v=wbvtcbcQATA
		Module -3: Elliptic curve arithmetic, abelian groups, elliptic curves over real numbers, elliptic curves over Zp, elliptic curves overGF(2m), Elliptic curve cryptography, Analog of Diffie-hellman key	https://www.youtube.com/watch?v=dC-R-wbUDnE&t=1s https://www.youtube.com/watch?v=vmG0Ikel4AU

3	07.11.2022 to 24.11.2022	exchange, Elliptic curve encryption/ decryption, security of Elliptic curve cryptography, Pseudorandom number generation based on an asymmetric cipher, PRNG based on RSA. **Key Management and Distribution:** Symmetric key distribution using Symmetric encryption, A key distribution scenario, Hierarchical key control, session key lifetime, a transparent key control scheme, Decentralized key control, controlling key usage, Symmetric key distribution using asymmetric encryption, simple secret key distribution, secret key distribution with confidentiality and authentication, A hybrid scheme, distribution of public keys, public announcement of public keys, publicly available directory,public key authority, public keys certificates. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=xDdgvoD0n0 https://www.youtube.com/watch?v=EWuxwAzDZk
4	25.11.2022 to 12.12.2022	**Module -4 :** X-509 certificates, Certificates, X-509 version 3, public key infrastructure **User Authentication:** Remote user Authentication principles, Mutual Authentication, one wayAuthentication, remote user Authentication using Symmetric encryption, Mutual Authentication, one way Authentication, Kerberos, Motivation , Kerberos version 4, Kerberos version 5, Remote user Authentication using Asymmetric encryption, Mutual Authentication, one way Authentication. **Electronic Mail Security:** Pretty good privacy, notation, operational; description, S/MIME, RFC5322, Multipurpose internet mail extensions, S/MIME functionality, S/MIME messages, S/MIME certificate processing, enhanced security services, Domain keys identified mail, internet mail architecture, E-Mail threats, DKIM strategy, DKIM functional flow. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=jDFE1PQmvZA https://www.youtube.com/watch?v=xAs2HWxapCA https://www.youtube.com/watch?v=7RFJ5Ja4PbE https://www.youtube.com/watch?v=VHCHVIuDWf8&t=FLBMcfvHdpCa_xrwfbtOfaEL1dmVSOHE
5	15.12.2022 to 26.12.2022	**Module -5 :** **IP Security:** IP Security overview, applications of IPsec, benefits of IPsec, Routing applications, IPsec documents, IPsec services, transport and tunnel modes, IP Security policy, Security associations, Security associations database, Security policy database, IP traffic processing, Encapsulating Security payload, ESP format, encryption and authentication algorithms, Padding, Anti replay service **Transport and tunnel modes**, combining security associations, authentication plus confidentiality, basic combinations of security associations, internet key exchange, key determinations protocol, header and payload formats, cryptographic suits. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=xwtZBLa5Qal https://www.youtube.com/watch?v=4RaFUcWbtcM https://www.youtube.com/watch?v=wkmUzk8Sgc0 https://www.youtube.com/watch?v=C4REeN1_DAk&t=FLYwmL_9Fm1-0IU5wcw_vNAbuUx_99EJu

TEXT BOOKS:

1. William Stallings: Cryptography and Network Security, Pearson 6th edition.

REFERENCE BOOKS:

1. V K Pachghare: Cryptography and Information Security, PHI 2nd Edition

Mr. Suban R
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (SEP -DEC 2022) MICROSCHEDULE ODD 22-23

SUBJECT	**Cryptography**	**STAFF NAME**	**SUTHAN R**
SUBJECT CODE	**18CS744**	**SEM/SEC**	**VII**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

MODULE 1

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	26/09/22	MON	**Classical Encryption Techniques** Symmetric Cipher Model, Cryptography, Cryptanalysis and Brute-Force Attack	Covered	
2	29/09/22	THU	Substitution Techniques, Caesar Cipher, Monoalphabetic Cipher, Playfair Cipher, Hill Cipher	Covered	
3	29/09/22	THU	Polyalphabetic Cipher, One Time Pad. **Block Ciphers and the data encryption standard:** Traditional block Cipher structure	Covered	
4	30/09/22	FRI	stream Ciphers and block Ciphers, Motivation for the feistel Cipher structure, the feistel Cipher	Covered	
5	03/10/22	MON	The data encryption standard, DES encryption, DES decryption, A DES example	Covered	
6	06/10/22	THU	The avalanche effect, the strength of DES, the use of 56-Bit Keys	Covered	
7	06/10/22	THU	the nature of the DES algorithm, timing attacks	Covered	
8	07/10/22	FRI	Block cipher design principles	Covered	
9	10/10/22	MON	number of rounds, design of function F, key schedule algorithm	Covered	
10	13/10/22	THU	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 26.09.2022**	**TO: 13.10.2022**	
ACTUAL CLASSES TAKEN	**FROM:** 26.09.22	**TO:** 13.10.22	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:** 10	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:**	**QP DISCUSSION:** ✓
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Suthan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
11	13/10/22	THU	**Public-Key Cryptography and RSA:** Principles of public-key cryptosystems. Public-key cryptosystems	Covered	
12	14/10/22	FRI	Applications for public-key cryptosystems, requirements for public-key cryptosystems	Covered	
13	17/10/22	MON	public-key cryptanalysis. The RSA algorithm	Covered	
14	20/10/22	THU	description of the algorithm, computational aspects, the security of RSA	Covered	
15	20/10/22	THU	**Other Public-Key Cryptosystems:** Diffie-hellman key exchange,	Covered	
16	21/10/22	FRI	The algorithm, key exchange protocols	covered	
17	31/10/22	MON	The algorithm, key exchange protocols	Covered	
18	03/11/22	THU	Elgamal Cryptographic systems	covered	
19	03/11/22	THU	Elgamal Cryptographic systems cont...	covered	
20	04/11/22	FRI	Question paper discussion	covered	

SUMMARY

PLANNED DATE	FROM: 13.10.2022	TO: 04.11.2022	
ACTUAL CLASSES TAKEN	FROM: 13.10.22	TO: 04.11.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suthan R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
21	07/11/22	MON	Elliptic curve arithmetic, abelian groups, elliptic curves over real numbers, elliptic curves over Zp	Covered	
22	10/11/22	THU	elliptic curves overGF(2m), Elliptic curve cryptography, Analog of Diffie-hellman key exchange,	Covered	
23	10/11/22	THU	Elliptic curve encryption/ decryption, security of Elliptic curve cryptography	Covered	
24	14/11/22	MON	Pseudorandom number generation based on an asymmetric cipher	Covered	
25	17/11/22	THU	PRNG based on RSA	Covered	
26	17/11/22	THU	**Key Management and Distribution:** Symmetric key distribution using Symmetric encryption, A key distribution scenario	Covered	
27	18/11/22	FRI	Hierarchical key control, session key lifetime, a transparent key control scheme, Decentralized key control	Covered	
28	21/11/22	MON	controlling key usage, Symmetric key distribution using asymmetric encryption, simple secret key distribution	Covered	
29	24/11/22	THU	secret key distribution with confidentiality and authentication, A hybrid scheme, distribution of public keys,	Covered	
30	24/11/22	THU	public announcement of public keys, publicly available directory Question paper discussion	Covered	

SUMMARY

PLANNED DATE	FROM: 07.11.2022	TO:24.11.2022	
ACTUAL CLASSES TAKEN	FROM: 07.11.22	TO: 24.11.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
PRINCIPAL
BHOOMEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
31	25/11/22	FRI	X-509 certificates. Certificates, X-509 version 3, public key infrastructure	Covered	
32	28/11/22	MON	**User Authentication:** Remote user Authentication principles, Mutual Authentication,	Covered	
33	28/12/22	MON	one wayAuthentication, remote user Authentication using Symmetric encryption	Covered	EXTRA
34	05/12/22	MON	Mutual Authentication, one way Authentication, Kerberos, Motivation , Kerberos version 4	Covered	
35	05/12/22	MON	Kerberos version 5, Remote user Authentication using Asymmetric encryption, Mutual Authentication, one way Authentication	Covered	EXTRA
36	08/12/22	THU	**Electronic Mail Security:** Pretty good privacy, notation, operational; description, S/MIME, RFC5322, Multipurpose internet mail extensions	Covered	
37	08/12/22	THU	S/MIME functionality, S/MIME messages, S/MIME certificate processing, enhanced security services	Covered	
38	09/12/22	FRI	Domain keys identified mail, internet mail architecture, E-Mail threats	Covered	
39	12/12/22	MON	DKIM strategy, DKIM functional flow.	Covered	
40	12/12/22	MON	Question paper discussion	Covered	EXTRA

SUMMARY

PLANNED DATE	FROM: 25.11.2022	TO: 12.12.2022	
ACTUAL CLASSES TAKEN	FROM: 25.11.22	TO: 12.12.22	
NUMBER OF CLASSES	ALLOCATED: 10	TAKEN: 10	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓ (60%)	IA 3: ✓ (90%)
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS:	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr. Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal
PRINCIPAL
BMS DEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
BANGALORE - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
41	15/12/22	THU	**IP Security:** IP Security overview, applications of IPsec, benefits of IPsec, Routing applications	Covered	
42	15/12/22	THU	IPsec documents, IPsec services, transport and tunnel modes, IP Security policy, Security associations	Covered	
43	16/12/22	FRI	Security associations database, Security policy database, IP traffic processing, Encapsulating Security payload	Covered	
44	19/12/22	MON	ESP format, encryption and authentication algorithms, Padding, Anti replay service	Covered	
45	19/12/22	MON	**Transport and tunnel modes**, combining security associations, authentication plus confidentiality,	Covered	EXTRA
46	22/12/22	THU	**Transport and tunnel modes**, combining security associations, authentication plus confidentiality,	Covered	
47	22/12/22	THU	basic combinations of security associations, internet key exchange	Covered	
48	23/12/22	FRI	key determinations protocol	Covered	
49	23/12/22	FRI	header and payload formats, cryptographic suits.	Covered	EXTRA
50	26/12/22	MON	Question paper discussion	Covered	

SUMMARY

PLANNED DATE	**FROM: 15.12.2022**	**TO: 26.12.2022**	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 10**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr. Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
BHOOMI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMAKURU - 572106.

SIDDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

LESSON PLAN (SEP -DEC 2022) MACROSCHEDULE

SUBJECT	Cryptography	STAFF NAME	SUTHAN R
SUBJECT CODE	18CS744	SEM/SEC	VII-B
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Define cryptography and its principles
- Explain Cryptography algorithms
- Illustrate Public and Private key cryptography
- Explain Key management, distribution and certification
- Explain authentication protocols

SL. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	26.09.2022 to 13.10.2022	**Module- 1:Introduction** **Classical Encryption Techniques** Symmetric Cipher Model, Cryptography, Cryptanalysis and Brute-Force Attack, Substitution Techniques, Caesar Cipher, Monoalphabetic Cipher, Playfair Cipher, Hill Cipher, Polyalphabetic Cipher, One Time Pad. **Block Ciphers and the data encryption standard:** Traditional block Cipher structure, stream Ciphers and block Ciphers, Motivation for the feistel Cipher structure, the feistel Cipher, The data encryption standard, DES encryption, DES decryption, A DES example, results, the avalanche effect, the strength of DES, the use of 56-Bit Keys, the nature of the DES algorithm, timing attacks, Block cipher design principles, number of rounds, design of function F, key schedule algorithm **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=ZPvbAzqiDuE https://www.youtube.com/watch?v=JPdkt6zAo4k&list=PLBCF3A7A6E103A5A0&index=1&t=0s https://www.youtube.com/watch?v=IBA79Ug1A3o
2	13.10.2022 to 04.11.2022	**Module -2** **Public-Key Cryptography and RSA:** Principles of public-key cryptosystems. Public-key cryptosystems. Applications for public-key cryptosystems, requirements for public-key cryptosystems. public-key cryptanalysis. The RSA algorithm, description of the algorithm, computational aspects, the security of RSA. **Other Public-Key Cryptosystems:** Diffie-hellman key exchange, The algorithm, key exchange protocols, man in the middle attack,Elgamal Cryptographic systems **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=JDSVHDOHjfM https://www.youtube.com/watch?v=mch5GfAf20k https://www.youtube.com/watch?v=hsZsbqTDZS
		Module -3: Elliptic curve arithmetic, abelian groups, elliptic curves over real numbers, elliptic curves over Zp, elliptic curves overGF(2m), Elliptic curve cryptography, Analog of Diffie-hellman key	https://www.youtube.com/watch?v=4CsB-mHkDbs&t=18s https://www.youtube.com/watch?v=mGMJ4ARCD

3	07.11.2022 to 24.11.2022	exchange, Elliptic curve encryption/ decryption, security of Elliptic curve cryptography, Pseudorandom number generation based on an asymmetric cipher, PRNG based on RSA. **Key Management and Distribution:** Symmetric key distribution using Symmetric encryption, A key distribution scenario, Hierarchical key control, session key lifetime, a transparent key control scheme, Decentralized key control, controlling key usage, Symmetric key distribution using asymmetric encryption, simple secret key distribution, secret key distribution with confidentiality and authentication, A hybrid scheme, distribution of public keys, public announcement of public keys, publicly available directory,public key authority, public keys certificates. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=xDr4qwt3bs3 https://www.youtube.com/watch?v=EWvmAzQ33ik
4	28.11.2022 to 12.12.2022	**Module -4 :** X-509 certificates. Certificates, X-509 version 3, public key infrastructure .**User Authentication:** Remote user Authentication principles, Mutual Authentication, one wayAuthentication, remote user Authentication using Symmetric encryption, Mutual Authentication, one way Authentication, Kerberos, Motivation , Kerberos version 4, Kerberos version 5, Remote user Authentication using Asymmetric encryption, Mutual Authentication, one way Authentication. **Electronic Mail Security:** Pretty good privacy, notation, operational description, S/MIME, RFC5322, Multipurpose internet mail extensions, S/MIME functionality, S/MIME messages, S/MIME certificate processing, enhanced security services, Domain keys identified mail, internet mail architecture, E-Mail threats, DKIM strategy, DKIM functional flow. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=sIQ5HOBmsEA https://www.youtube.com/watch?v=xAs30WwqnC8 https://www.youtube.com/watch?v=79P3HKqWbiU https://www.youtube.com/watch?v=VHBJ0YiuF9M&list=PLBlnK6fEyqRiVhbXDGLvmnGCQDmESVsBW&index=8
5	15.12.2022 to 26.12.2022	**Module -5 :** **IP Security:** IP Security overview, applications of IPsec, benefits of IPsec, Routing applications, IPsec documents, IPsec services, transport and tunnel modes, IP Security policy, Security associations, Security associations database, Security policy database, IP traffic processing, Encapsulating Security payload, ESP format, encryption and authentication algorithms, Padding, Anti replay service **Transport and tunnel modes,** combining security associations, authentication plan confidentiality, basic combinations of security associations, internet key exchange, key determinations protocol, header and payload formats, cryptographic suits. **No. of Contact Sessions: 10**	https://www.youtube.com/watch?v=xnrUBLaNiaU https://www.youtube.com/watch?v=QLaUvxWJvz8 https://www.youtube.com/watch?v=ykmHcHCuyfY https://www.youtube.com/watch?v=CvLBKwSQ_E8&list=PLLy_2iUCG87AEK8G7gg6L_Bl_mcXHJf05&index=58&t=1s

TEXT BOOKS:

1. William Stallings: Cryptography and Network Security, Pearson 6th edition.

REFERENCE BOOKS:

1. V K Pachghare: Cryptography and Information Security, PHI 2nd Edition

Mr. Suhas R
Staff Incharge

Dr Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
572106

DBMS MARCH SCHEDULE

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN MACRO SCHEDULE
2022-23 (Odd)

SUBJECT	**DATABASE MANAGEMENT SYSTEM**	**STAFF NAME**	MTS Shruthi S
SUBJECT CODE	**18CS53**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

- Identify, analyze and define database objects, enforce integrity constraints on a database using RDBMS.
- Use Structured Query Language (SQL) for database manipulation
- Design and build simple database systems
- Develop application to interact with databases

SL No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	17/10/22 to 03/11/22	**Module-1**: Introduction to Databases: Introduction, Characteristics of database approach, Advantages of using the DBMS approach, History of database applications. Overview of Database Languages and Architectures: Data Models, Schemas, and Instances. Three schema architecture and data independence, database languages, and interfaces, The Database System environment. Conceptual Data Modelling using Entities and Relationships. Entity types, Entity sets, attributes, roles, and structural constraints, Weak entity types, ER diagrams, examples. Specialization and Generalization **No. of Contact Sessions:**	https://www.youtube.com/results?search_query=Introduction+to+Databases
2	05/11/22 to 26/11/22	**Module-2** Relational Model: Relational Model Concepts, Relational Model Constraints and relational database schemas, Update operations, transactions, and dealing with constraint violations. Relational Algebra: Unary and Binary relational operations, additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra. Mapping Conceptual Design into a Logical Design: Relational Database Design using ER-to-Relational mapping. SQL: SQL data definition and data types, specifying constraints in SQL, retrieval queries in SQL, INSERT, DELETE, and UPDATE statements in SQL. Additional features of SQL.	https://www.youtube.com/results?search_query=Relational+Model

		No. of Contact Sessions:	
3	३०/११/२२ -ते- २१/१२/२३	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries, Specifying constraints as assertions and action triggers, Views in SQL, Schema change statements in SQL. Database Application Development: Accessing databases from applications, An introduction to JDBC, JDBC classes and interfaces, SQLJ, Stored procedures, Case study: The internet Bookshop. Internet Applications: The three-Tier application architecture, The presentation layer, The Middle Tier **No. of Contact Sessions:**	https://www.youtube.com/results?search_query=SQL
4	२२/१२/२३ -ते- ०५/०४/२४	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies: Informal design guidelines for relation schema, Functional Dependencies, Normal Forms based on Primary Keys, Second and Third Normal Forms, Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form, Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decompositions, Algorithms for Relational Database Schema Design, Nulls, Dangling tuples, and alternate Relational Designs, Further discussion of Multivalued dependencies and 4NF, Other dependencies and Normal Forms **No. of Contact Sessions:**	https://www.youtube.com/results?search_query=Normalization
5	०१/०१/२२ -ते- २१/०१/२२	**Module -5** Transaction Processing: Introduction to Transaction Processing, Transaction and System concepts, Desirable properties of Transactions, Characterizing schedules based on recoverability, Characterizing schedules based on Serializability, Transaction support in SQL. Concurrency Control in Databases: Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering, Multiversion Concurrency control techniques, Validation Concurrency control techniques, Granularity of Data items and Multiple Granularity Locking. Introduction to Database Recovery Protocols: Recovery Concepts, NO-UNDO/REDO recovery based on Deferred update, Recovery techniques based on immediate update, Shadow paging, Database backup and recovery from catastrophic failures **No. of Contact Sessions:**	https://www.youtube.com/results?search_query=Transaction+Processing

TEXT BOOKS:

1. **Fundamentals of Database Systems, Ramez Elmasri and Shamkant B. Navathe, 7th Edition, 2017,**
2. **Pearson. 2. Database management systems, Ramakrishnan, and Gehrke, 3rd Edition, 2014, McGraw Hill**

REFERENCE BOOKS:

1. Silberschatz Korth and Sudharshan, Database System Concepts, 6th Edition, Mc-GrawHill, 2013.

2. Coronel, Morris, and Rob, Database Principles Fundamentals of Design, Implementation and Managment, Cengage Learning 2012.

Shruthi S
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

DBMS MICRO SCHEDULE

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (2021-22 (odd)) MICRO SCHEDULE

SUBJECT	**DATABASE MANAGEMENT SYSTEM**	**STAFF NAME**	Mrs. Shruthi S
SUBJECT CODE	**18CS53**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

MODULE 1					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
1	17/10/22	MON	**Module-1**: Introduction to Databases: Introduction,	Covered	
2	19/10/22	WED	Characteristics of database approach, Advantages of using the DBMS approach,	Covered	
3	20/10/22	THU	History of database applications. Overview of Database Languages and Architectures	Covered	
4	22/10/22	SAT	Data Models, Schemas, and Instances	Covered	
5	27/10/22	THU	Three schema architecture and data independence,	Covered	
6	29/10/22	SAT	database languages, and interfaces, The Database System environment	Covered	
7	31/10/22	MON	. Conceptual Data Modelling using Entities and Relationships:	Covered	
8	02/11/22	WED	Entity types, Entity sets, attributes, roles, and structural constraints, Weak entity types, ER diagrams	Covered	
9	03/11/22	THU	examples, Specialization and Generalization	Covered	

SUMMARY

PLANNED DATE	**FROM:** 17/10/22	**TO:** 03/11/22	
ACTUAL CLASSES TAKEN	**FROM:** 18/10/22	**TO** 01/11/22	
NUMBER OF CLASSES	**ALLOCATED:09**	**TAKEN:** 08	
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 01	**TUTORIALS:** 01	**QP DISCUSSION:** 01
	QUIZ: 01	**SEMINARS:** 03	**ANY OTHER:** —

Shruthi S
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR

MODULE II

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
10	05/11/22	SAT	Relational Model: Relational Model Concepts.	covered	
11	07/11/22	MON	Relational Model Constraints and relational database schemas	covered	
12	09/11/22	WED	Update operations, transactions, and dealing with constraint violations.	covered	
13	10/11/22	THU	Relational Algebra: Unary and Binary relational operations	covered	
14	17/11/22	THU	additional relational operations (aggregate, grouping, etc.) Examples of Queries in relational algebra	covered	
15	19/11/22	SAT	Mapping Conceptual Design into a Logical Design	covered	
16	21/11/22	MON	Relational Database Design using ER-to-Relational mapping.	covered	
17	23/11/22	WED	SQL: SQL data definition and data types, specifying constraints in SQL	covered	
18	24/11/22	THU	retrieval queries in SQL, INSERT,	covered	
19	26/11/22	SAT	DELETE, and UPDATE statements in SQL	covered	
20	28/11/22	MON	Additional features of SQL	covered	

SUMMARY

PLANNED DATE	**FROM:** 05/11/22	**TO:** 28/11/22	
ACTUAL CLASSES TAKEN	**FROM:** 05/11/22	**TO:** 26/11/22	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 01	**TUTORIALS:** 1	**QP DISCUSSION:** 1
	QUIZ: 1	**SEMINARS:** 02	**ANY OTHER:**

Shruthi S
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

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SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE III					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
21	30/11/22	**WED**	**Module -3** SQL : Advances Queries: More complex SQL retrieval queries,	Covered	
22	01/12/22	**THU**	Specifying constraints as assertions and action triggers,	Covered	
23	03/12/22	SAT	Views in SQL, Schema change statements in SQL.	Covered	
24	05/12/22	MON	Database Application Development:,	Covered	
25	07/12/22	WED	Accessing databases from applications	Covered	
26	08/12/22	THU	An introduction to JDBC,	Covered	
27	10/12/22	SAT	JDBC classes and interfaces,	Covered	
28	12/12/22	MON	SQLJ, Stored procedures, Case study:	Covered	
29	14/12/22	WED	The internet Bookshop. Internet Applications:	Covered	
30	15/12/22	THU	The three-Tier application architecture,	Covered	
31	21/12/22	WED	The presentation layer, The Middle Tier		

SUMMARY

PLANNED DATE	**FROM:** 30/11/22	**TO:** 21/12/22	
ACTUAL CLASSES TAKEN	**FROM:** 30/11/22	**TO:** 21/12/22	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:** 11	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** 1	**TUTORIALS:** 1	**QP DISCUSSION:** 1
	QUIZ: 1	**SEMINARS:** 02	**ANY OTHER:** -

Sujatha S
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY

MODULE IV					
Sl. No,	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
32	22/12/22	**THU**	**Module -4** Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies	Covered	
33	24/12/22	**SAT**	Informal design guidelines for relation schema, Functional Dependencies	Covered	
34	26/12/22	MON	Normal Forms based on Primary Keys, Second and Third Normal Forms,	Covered	
35	28/12/22	WED	Boyce-Codd Normal Form, Multivalued Dependency and Fourth Normal Form,	Covered	
36	29/12/22	THU	Join Dependencies and Fifth Normal Form. Normalization Algorithms: Inference Rules,	Covered	
37	31/12/22	SAT	Equivalence, and Minimal Cover, Properties of Relational Decompositions,	Covered	
38	02/01/22	MON	Algorithms for Relational Database Schema Design	Covered	
39	04/01/22	WED	Nulls, Dangling tuples,	Covered	
40	05/01/22	THU	alternate Relational Designs	Covered	
41	07/01/22	SAT	Further discussion of Multivalued dependencies and 4NF	Covered	
42	09/01/22	MON	Other dependencies and Normal Forms	Covered.	

SUMMARY

PLANNED DATE	**FROM:** 22/12/22	**TO:** 09/01/22	
ACTUAL CLASSES TAKEN	**FROM:** 22/12/22	**TO:** 09/1/22	
NUMBER OF CLASSES	**ALLOCATED:** 10	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Shruthi S
Staff Incharge

Dr Basaveshwa D
HOD, CSE

Dr. Narendra V
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	09/01/22	MON	**Module -5** Transaction Processing: Introduction to Transaction Processing,	Covered	EXTRA
46	09/01/22	MON	Transaction and System concepts, Desirable properties of Transactions,	Covered	
47	11/01/22	WED	Characterizing schedules based on recoverability, Characterizing schedules based on Serializability	Covered	EXTRA
48	12/01/22	THU	Transaction support in SQL. Concurrency Control in Databases	Covered	
49	14/01/22	SAT	Two-phase locking techniques for Concurrency control, Concurrency control based on Timestamp ordering,	Covered	
50	14/01/22	SAT	Multiversion Concurrency control techniques, Validation Concurrency control techniques,	Covered	EXTRA
51	19/01/22	THU	Granularity of Data items and Multiple Granularity Locking	Covered	
52	20/01/22	FRI	Introduction to Database Recovery Protocols: Recovery Concepts,	Covered	
53	20/01/22	FRI	NO-UNDO/REDO recovery based on Deferred update,	Covered	EXTRA
54	21/01/22	SAT	Recovery techniques based on immediate update,	Covered	
55	21/01/22	SAT	Shadow paging, Database backup and recovery from catastrophic failures	Covered	EXTRA

SUMMARY

PLANNED DATE	**FROM:** 09/01/22	**TO:** 21/01/22	
ACTUAL CLASSES TAKEN	**FROM:** 09/01/22	**TO:** 21/01/22	
NUMBER OF CLASSES	**ALLOCATED:** 11	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:** ✓	**IA 2:** ✓	**IA 3:** ✓
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:** ✓	**TUTORIALS:** ✓	**QP DISCUSSION:**
	QUIZ: ✓	**SEMINARS:** ✓	**ANY OTHER:** ✓

Shruthi S
Staff Incharge

Dr Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
ENGINEERING & TECHNOLOGY

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2022- 23 (Odd Sem)

LECTURE PLAN

Semester : III (A section) Year: 2022-23

Subject Title: Programming in C++	Subject Code: 21CSL382
Number of Contact Hours/Week (L:T:P:S): 1:0:0:0 Total Number of Contact Hours 15	Duration of Exam: 01 Hr.
Total exam marks: 50	Total I.A. marks: 50
Lesson plan author: Mr. Renukaradhya P C	Date: 02/11/2022
Checked by: Dr.Basavesha D	Date: 03/11/2022

Objectives:

- Understanding about object oriented programming and Gain knowledge about the capability to store information together in an object.
- Understand the capability of a class to rely upon another class and functions.
- Understand about constructors which are special type of functions.
- Create and process data in files using file I/O functions.
- Use the generic programming features of C++ including Exception handling.

Outcomes:

At the end of the course the student will be able to:

CO 1. Able to understand and design the solution to a problem using object-oriented programmingconcepts.

CO 2. Able to reuse the code with extensible Class types, User-defined operators and function Overloading.

CO 3. Achieve code reusability and extensibility by means of Inheritance and Polymorphism

CO 4. Identify and explore the Performance analysis of I/O Streams.

CO 5. Implement the features of C++ including templates, exceptions and file handling for providing programmed solutions to complex problems.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
1	31/10/22	Module-1 Introduction to Object Oriented Programming: Computer programming background- C++ overview- First C++ Program -Basic C++ syntax.	Covered	
2	07/11/22	Object Oriented Programming: What is an object, Classes, methods and messages, abstraction and encapsulation, inheritance, abstract classes, polymorphism.	Covered	
3	14/11/22	Module-2 Functions in C++: Tokens – Keywords – Identifiers and constants – Operators in C++ – Scope resolution operator – Expressions and their types – Special assignment expressions – Function prototyping – Call by reference – Return by reference – Inline functions -Default arguments – Function overloading.	Covered	

4	21/11/22	Module-3 Inheritance & Polymorphism: Derived class Constructors, destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple, Hierarchical Inheritance, Hybrid Inheritance.	Covered	
5	28/11/22	destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple,	Covered	
6	05/12/22	Hierarchical Inheritance, Hybrid Inheritance.	Covered	
7	19/12/22	IA – 1		
8	26/12/22	Module-4 I/O Streams: C++ Class Hierarchy- File Stream-		
9	02/01/23	Text File Handling- Binary File Handling during file operations.		
10	09/01/23	Continue..		
11	16/01/23	Continue..		
12	23/01/23	Module-5 Exception Handling: Introduction to Exception -		
13	30/01/23	Benefits of Exception handling- Try and catch block- Throw statement- Pre-defined exceptions in C++		
14	06/01/23	IA – 2		
15	06/01/23	Revision..		

Mr.Renukaradhya P C
Staff in charge

Dr.Basavesha D
HOD- CSE

Dr.Narendra Kumar
PRINCIPAL
SIDDAGANGA INSTITUTE OF TECHNOLOGY
TUMKUR - 572103.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2022- 23 (Odd Sem)

LECTURE PLAN

Semester :III (B section) Year:2022-23

Subject Title: Programming in C++	Subject Code: 21CSL382
Number of Contact Hours/Week (L:T:P:S): 1:0:0:0 Total Number of Contact Hours 13	Duration of Exam: 01 Hr.
Total exam marks: 50	Total I.A. marks: 50
Lesson plan author: Mr. Renukaradhya P C	Date: 02/11/2022
Checked by: Dr.Basavesha D	Date: 02/11/2022

Objectives:

- Understanding about object oriented programming and Gain knowledge about the capability to store information together in an object.
- Understand the capability of a class to rely upon another class and functions.
- Understand about constructors which are special type of functions.
- Create and process data in files using file I/O functions.
- Use the generic programming features of C++ including Exception handling.

Outcomes:

At the end of the course the student will be able to:

CO 1. Able to understand and design the solution to a problem using object-oriented programming concepts.

CO 2. Able to reuse the code with extensible Class types, User-defined operators and function Overloading.

CO 3. Achieve code reusability and extensibility by means of Inheritance and Polymorphism

CO 4. Identify and explore the Performance analysis of I/O Streams.

CO 5. Implement the features of C++ including templates, exceptions and file handling for providing programmed solutions to complex problems.

Sl. No.	Date	Planned Topics	Topics Covered	Remarks
1	31/10/22	Module-1 Introduction to Object Oriented Programming: Computer programming background- C++ overview- First C++ Program -Basic C++ syntax.	Covered	
2	07/11/22	Object Oriented Programming: What is an object, Classes, methods and messages, abstraction and encapsulation, inheritance, abstract classes, polymorphism.	Covered	
3	14/11/22	Module-2 Functions in C++: Tokens – Keywords – Identifiers and constants – Operators in C++ – Scope resolution operator – Expressions and their types – Special assignment expressions – Function prototyping – Call by reference – Return by reference – Inline functions -Default arguments – Function overloading.	Covered	

4	21/11/22	Module-3 Inheritance & Polymorphism: Derived class Constructors, destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple, Hierarchical Inheritance, Hybrid Inheritance.	Covered	
5	28/11/22	destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple,	Covered	
6	05/12/22	Hierarchical Inheritance, Hybrid Inheritance.	Covered	
7	19/12/22	IA – 1		
8	26/12/22	Module-4 I/O Streams: C++ Class Hierarchy- File Stream-		
9	02/01/23	Text File Handling- Binary File Handling during file operations.		
10	09/01/23	Continue..		
11	16/01/23	Continue..		
12	23/01/23	Module-5 Exception Handling: Introduction to Exception ..		
13	30/01/23	Benefits of Exception handling- Try and catch block-Throw statement- Pre-defined exceptions in C++		
14	06/01/23	IA – 2		
15	06/01/23	Revision..		

Mr.Renukaradhya P C
Staff in charge

Dr.Basavesha D
HOD- CSE

Dr.Narendra Viswanath
Principal

PRINCIPAL
SRI SIDDHARTHA INSTITUTE OF ENGINEERING & TECHNOLOGY,
TUMKUR - 572105.

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2022- 23 (Odd Sem)

LECTURE PLAN

Semester :III (B section) Year:2022-23

Subject Title: Programming in C++	Subject Code: 21CSL382
Number of Contact Hours/Week (L:T:P:S): 1:0:0:0 Total Number of Contact Hours 15	Duration of Exam: 01 Hr.
Total exam marks: 50	Total I.A. marks: 50
Lesson plan author: Mr. Renukarsdhya P C	Date: 02/11/2022
Checked by: Dr.Suhas G K	Date: 02/11/2022

Objectives:

- Understanding about object oriented programming and Gain knowledge about the capability to store information together in an object.
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CO 3. Achieve code reusability and extensibility by means of Inheritance and Polymorphism

CO 4. Identify and explore the Performance analysis of I/O Streams.

CO 5. Implement the features of C++ including templates, exceptions and file handling for providing programmed solutions to complex problems.

SL No.	Date	Planned Topics	Topics Covered	Remarks
1	31/10/22	Module-1 Introduction to Object Oriented Programming: Computer programming background- C++ overview- First C++ Program -Basic C++ syntax.	Covered	
2	07/11/22	Object Oriented Programming: What is an object, Classes, methods and messages, abstraction and encapsulation, inheritance, abstract classes, polymorphism.	Covered	
3	14/11/22	Module-2 Functions in C++: Tokens – Keywords – Identifiers and constants – Operators in C++ – Scope resolution operator – Expressions and their types – Special assignment expressions – Function prototyping – Call by reference – Return by reference – Inline functions -Default arguments – Function overloading.	Covered	

4	21/11/22	Module-3 Inheritance & Polymorphism: Derived class Constructors, destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple, Hierarchical Inheritance, Hybrid Inheritance.	Covered	
5	28/11/22	destructors-Types of Inheritance- Defining Derived classes, Single Inheritance, Multiple,	Covered	
6	05/12/22	Hierarchical Inheritance, Hybrid Inheritance.	Covered	
7	19/12/22	IA – 1	done	
8	26/12/22	Module-4 I/O Streams: C++ Class Hierarchy- File Stream-	Covered	
9	02/01/23	Text File Handling- Binary File Handling during file operations.	Covered	
10	09/01/23	Continue..		
11	16/01/23	Continue..		
12	23/01/23	Module-5 Exception Handling: Introduction to Exception -		
13	30/01/23	Benefits of Exception handling- Try and catch block- Throw statement- Pre-defined exceptions in C++		
14	06/01/23	IA – 2		
15	06/01/23	Revision..		

Mr.Renukaradhya P C
Staff in charge

Dr.Suhas G K
HOD-ISE

Dr.NarendraViswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2022) MICROSCHEDULE

ODD22-23 [CS]

SUBJECT	APPLICATION DEVELOPMENT USING PYTHON	STAFF NAME	Mr. RENUKARADHYA P C
SUBJECT CODE	18CS55	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE I					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	10/10/22	MON	**Module – 1 :Python Basics**, Entering Expressions into the Interactive Shell.	Covered	
2	11/10/22	TUE	The Integer, Floating-Point, and String Data Types.	Covered	
3	12/10/22	WED	String Concatenation and Replication, Storing Values in Variables	Covered	
4	13/10/22	THU	**Flow control**, Boolean Values, Comparison Operators, Boolean Operators	Covered	
5	17/10/22	MON	Mixing Boolean and Comparison Operators, Elements of Flow Control.	Covered	
6	18/10/22	TUE	Program Execution, Flow Control Statements	Covered	
7	19/10/22	WED	Importing Modules,Ending a Program Early with sys.exit().	Covered	
8	20/10/22	THU	**Functions**, def Statements with Parameters, Return Values and return Statements,The None Value	Covered	
9	25/10/22	MON	Keyword Arguments and print().	Covered	
10	27/10/22	TUE	Local and Global Scope,	Covered	
11	31/10/22	WED	The global Statement, Exception Handling	Covered	

SUMMARY

PLANNED DATE	10.10.2022	TO: 31.10.2022	
ACTUAL CLASSES TAKEN	FROM: 10.10.22	TO: 31.10.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.Renukaradhya P C
Staff Incharge

Dr.Basavesha D
HOD, CSE

Dr. Narendra Viswanath
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY TUMKUR - 572106

MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	01/11/22	MON	**Lists,** The List Data Type, Working with Lists	Covered	
13	02/11/22	TUE	Augmented Assignment Operators, Methods	Covered	
14	03/11/22	WED	Example Program: Magic 8 Ball with a List	Covered	
15	04/11/22	THU	List-like Types: Strings and Tuples,References	Covered	
16	07/11/22	MON	**Dictionaries and Structuring Data,** The Dictionary Data Type,	Covered	
17	08/11/22	TUE	Pretty Printing	Covered	
18	09/11/22	WED	Using Data Structures to Model Real-World Things.	Covered	
19	10/11/22	THU	**Manipulating Strings,** Working with Strings	Covered	
20	15/11/22	MON	Useful String Methods.	Covered	
21	16/11/22	TUE	Project: Password Locker	Covered	
22	17/11/22	WED	Project: Adding Bullets to Wiki Markup adding bullets to wiki markup contd.	Covered	

SUMMARY

PLANNED DATE	FROM: 01.11.2022	TO: 17.11.2022	
ACTUAL CLASSES TAKEN	FROM: 1.11.22	TO: 19.11.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.Renukaradhya P C
Staff Incharge

Dr.Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal
PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Tumakuru - 572106.

MODULE III

Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	21/11/22	MON	**Pattern Matching with Regular Expressions**, Finding Patterns of Text Without Regular Expressions.	Covered	
24	22/11/22	TUE	Finding Patterns of Text with Regular Expressions	Covered	
25	23/11/22	WED	More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching.	Covered	
26	24/11/22	THU	The findall() Method, Character Classes, Making Your Own Character Classes	Covered	
27	28/11/22	MON	The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching	Covered	
28	29/11/22	TUE	Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re .IGNORECASE, re .DOTALL, and re .VERBOSE	Covered	
29	30/11/22	WED	Project: Phone Number and Email Address Extractor, **Reading and Writing Files**, Files and File Paths	Covered	
30	01/12/22	THU	The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function	Covered	
31	02/12/22	MON	Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files**, The shutil Module	Covered	
32	05/12/22	TUE	Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style	Covered	
33	06/12/22	WED	Dates in European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging**, Raising Exceptions getting the traceback as a string assertions, logging IDLE's debugger	Covered	

SUMMARY

PLANNED DATE	FROM: 21.11.22	TO:06.12.22	
ACTUAL CLASSES TAKEN	FROM: 21.11.22	TO: 6.12.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.RenuKaradhya P C
Staff Incharge

Dr.Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572 106.

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	07/12/22	MON	**Classes and objects.** Programmer-defined types. Attributes, Rectangles. Instances as return values. Objects are mutable. Copying	Covered	
35	08/12/22	TUE	**Classes and functions.** Time. Pure functions. Modifiers. Prototyping versus planning.	Covered	
36	12/12/22	WED	**Classes and methods.** Object-oriented features. Printing objects. Another example.	Covered	
37	13/12/22	THU	A more complicated example.Theinit method. The __str__ method. Operator overloading.	Covered	
38	14/12/22	MON	Type-based dispatch. Polymorphism. Interface and implementation	Covered	
39	15/12/22	TUE	**Inheritance.** Card objects. Class attributes	Covered	
40	20/12/22	WED	Comparing cards. Decks.		
41	21/12/22	THU	Printing the deck. Add, remove		
42	22/12/22	MON	shuffle and sort. Inheritance		
43	26/12/22	TUE	Class diagrams.		
44	27/12/22	WED	Data encapsulation		

SUMMARY

PLANNED DATE	FROM: 07.12.22	TO: 27.12.22	
ACTUAL CLASSES TAKEN	FROM: 07.12.22	TO:	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.Renukaradhya P C
Staff Incharge

Dr.Basaveshwa D
HOD, CSE

Dr. Na[illegible]
Principal
SHRI MADHWA VADIRAJA INSTITUTE OF ENGINEERING & TECHNOLOGY
TIRUPATHUR - 572106

MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	28/12/22	MON	**Web Scraping,** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module		
46	29/12/22	TUE	Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module		
47	02/01/23	WED	Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics		
48	03/01/23	THU	Controlling the Browser with the selenium Module		
49	04/01/23	MON	**Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module,		
50	05/01/23	TUE	Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents		
51	09/01/23	WED	Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns		
52	10/01/23	THU	**Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs		
53	11/01/23	MON	Word Documents, **Working with CSV files and JSON data,**		
54	12/01/23	TUE	The csv Module, Project: Removing the Header from CSV Files, JSON and APIs,		
55	19/01/23	WED	The json Module, Project: Fetching Current Weather Data		

SUMMARY

PLANNED DATE	**FROM: 28.12.22**	**TO: 19.01.23**	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr.Renukaradhya P C
Staff Incharge

Dr.Basavesha D
HOD, CSE

Principal

PRINCIPAL
BHARDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

RIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2023) MACROSCHEDULE

ODD 22-23

SUBJECT	**APPLICATION DEVELOPMENT USING PYTHON**	**STAFF NAME**	**Mr. RENUKARADHYA P C**
SUBJECT CODE	**18CS58**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

- **CO1**: Demonstrate proficiency in handling of loops and creation of functions.
- **CO2**: Identify the methods to create and manipulate lists, tuples and dictionaries.
- **CO3**: Discover the commonly used operations involving regular expressions and file system.
- **CO4**: Interpret the concepts of Object-Oriented Programming as used in Python.
- **CO5**:Determine the need for scraping websites and working with CSV, JSON and other file formats.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	10.10.2022 to 31.10.2022	**Module – 1 :** **Python Basics**, Entering Expressions into the Interactive Shell, The Integer, Floating-Point, and String Data Types, String Concatenation and Replication, Storing Values in Variables, Your First Program, Dissecting Your Program,**Flow control**, Boolean Values, Comparison Operators, Boolean Operators,Mixing Boolean and Comparison Operators, Elements of Flow Control, Program Execution, Flow Control Statements, Importing Modules,Ending a Program Early with sys.exit(), **Functions**, def Statements with Parameters, Return Values and return Statements,The None Value, Keyword Arguments and print(), Local and Global Scope, The global Statement, Exception Handling, A Short Program: Guess the Number	https://www.youtube.com/watch?v=01A2FzG5bME&list=PLDNAe6i8NKkpZkP0bVF3-O2PseiTzx_O https://www.youtube.com/watch?v=GQNTDv5dKbI&list=PLzjkTnHjUmn8nGQo7Sbq4mm2gkmdfCNCm https://www.youtube.com/watch?v=mE1n0O7gUEA&list=PL-JvKuiQoZAid-1Gn3WBbmWOWBtEMTWW
2.	01.11.2022 to 17.11.2022	**Module – 2:** **Lists**, The List Data Type, Working with Lists, Augmented Assignment Operators, Methods, Example Program: Magic 8 Ball with a List, List-like Types: Strings and Tuples,References, **Dictionaries and Structuring Data**, The Dictionary Data Type, Pretty Printing, Using Data Structures to Model Real-World Things, **Manipulating Strings**, Working with Strings, Useful String Methods, Project: Password Locker, Project: Adding Bullets to Wiki Markup	https://www.youtube.com/watch?v=2Bg2bW9zvBg https://www.youtube.com/watch?v=YAE1FsYGo6A https://www.youtube.com/watch?v=PfEmE07S4hw

3.	21.11.2022 to 06.12.2022	**Module – 3 :** **Pattern Matching with Regular Expressions,** Finding Patterns of Text Without Regular Expressions, Finding Patterns of Text with Regular Expressions,More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching, The findall() Method, Character Classes, Making Your Own Character Classes, The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching, Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re.IGNORECASE, re .DOTALL, and re .VERBOSE, Project: Phone Number and Email Address Extractor, **Reading and Writing Files,** Files and File Paths, The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function, Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files,** The shutil Module, Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging,** Raising Exceptions, Getting the Traceback as a String, Assertions, Logging, IDLE's Debugger	https://www.youtube.com/watch?v=ARvQcqJ_-NY https://www.youtube.com/watch?v=9M0pX3qt9s0 https://www.youtube.com/watch?v=OQNTDv5zKbE&list=PLeJaLq1gmvfwG0z-NbqoIsmn2gbsuBCXC&ml
4.	07.12.2022 to 27.12.2022	**Module 4:** **Classes and objects,** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying, **Classes and functions,** Time, Pure functions, Modifiers, Prototyping versus planning, **Classes and methods,** Object-oriented features, Printing objects, Another example, A more complicated example,The init method, The __str__ method, Operator overloading, Type-based dispatch, Polymorphism, Interface and implementation,**Inheritance,** Card objects, Class attributes, Comparing cards, Decks, Printing the deck, Add, remove, shuffle and sort, Inheritance, Class diagrams, Data encapsulation	https://www.youtube.com/watch?v=5dRGRng8KU3M https://www.youtube.com/watch?v=5dRGRng8KU3M&list=PLfl-ft3Hyhz0rE82NKbngTacXYIeA0v1d8h https://www.youtube.com/watch?v=lVR2a9hxI8&list=PLdo5W4Nhv31adUdE1W5r4MB0VLRbmZ1AQ9 https://www.youtube.com/watch?v=nN0lr72F5gE https://www.youtube.com/watch?v=Gc6tmWmuIBun

8.	28.12.2022 to 19.01.2023	**MODULE-5:** **Web Scraping,** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module, Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module, Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics, Controlling the Browser with the selenium Module, **Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module, Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents, Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns, Charts, **Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs, Word Documents, **Working with CSV files and JSON data,** The csv Module, Project: Removing the Header from CSV Files, JSON and APIs, The json Module, Project: Fetching Current Weather Data	https://www.youtube.com/watch?v=OKCbsDBN6c https://www.youtube.com/watch?v=xFx_HM4HI3A https://www.youtube.com/watch?v=Lm37BjOCaYM&list=PL8vmnXo7pVtwsQ8tWvdvGA7Of0nGcNHxb https://www.youtube.com/watch?v=3RBNPc4_Q6g https://www.youtube.com/watch?v=1FEP_sNb62k https://www.youtube.com/watch?v=PfkIS9qIMRI https://www.youtube.com/watch?v=nLmhmB6NzcM

Mr.Renukaradhya P C
Staff Incharge

Dr.Basavesha D
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
RIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

RIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR-572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2023) MACROSCHEDULE

SUBJECT	**APPLICATION DEVELOPMENT USING PYTHON**	**STAFF NAME**	**Mr. RENUKARADHYA P C**
SUBJECT CODE	**18CS55**	**SEM/SEC**	**V**
IA Marks (CIE)	**40 (Average of three tests for 30 marks and 10 marks for assignment)**	**Maximum Exam Marks (SEE)**	**60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)**

Course Outcomes or Cos

- **CO1**: Demonstrate proficiency in handling of loops and creation of functions.
- **CO2**: Identify the methods to create and manipulate lists, tuples and dictionaries.
- **CO3**: Discover the commonly used operations involving regular expressions and file system.
- **CO4**: Interpret the concepts of Object-Oriented Programming as used in Python
- **CO5**:Determine the need for scraping websites and working with CSV, JSON and other file formats.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1.	**10.10.2022 to 31.10.2022**	**Module – 1 :** **Python Basics**, Entering Expressions into the Interactive Shell, The Integer, Floating-Point, and String Data Types, String Concatenation and Replication, Storing Values in Variables, Your First Program, Dissecting Your Program,**Flow control**, Boolean Values, Comparison Operators, Boolean Operators,Mixing Boolean and Comparison Operators, Elements of Flow Control, Program Execution, Flow Control Statements, Importing Modules,Ending a Program Early with sys.exit(), **Functions**, def Statements with Parameters, Return Values and return Statements,The None Value, Keyword Arguments and print(), Local and Global Scope, The global Statement, Exception Handling, A Short Program: Guess the Number	https://www.youtube.com/watch?v=01A2ZsC3bME&list=PLfDN4rrl6RXKpZA9B3EFl-029sqTrx-3J https://www.youtube.com/watch?v=GQNTBvNKMEA&list=PLeJcTqHlbmnBnGQbvNbnInmw2gbnuBCNC&ml https://www.youtube.com/watch?v=twE1n0O7gEE&list=PL-fvKqQn5Ai6-1GsJWBbmnWQWB6EM7WW
2.	**01.11.2022 to 17.11.2022**	**Module – 2:** **Lists**, The List Data Type, Working with Lists, Augmented Assignment Operators, Methods, Example Program: Magic 8 Ball with a List, List-like Types: Strings and Tuples,References, **Dictionaries and Structuring Data**, The Dictionary Data Type, Pretty Printing, Using Data Structures to Model Real-World Things, **Manipulating Strings**, Working with Strings, Useful String Methods, Project: Password Locker, Project: Adding Bullets to Wiki Markup	https://www.youtube.com/watch?v=2Ro2tW9svRg https://www.youtube.com/watch?v=YAETvNGotA https://www.youtube.com/watch?v=P6EmF1t7S4Ihttps

3.	21.11.2022 to 06.12.2022	**Module – 3 :** **Pattern Matching with Regular Expressions,** Finding Patterns of Text Without Regular Expressions, Finding Patterns of Text with Regular Expressions,More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching, The findall() Method, Character Classes, Making Your Own Character Classes, The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching, Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re.IGNORECASE, re.DOTALL, and re.VERBOSE, Project: Phone Number and Email Address Extractor, **Reading and Writing Files,** Files and File Paths, The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function, Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files,** The shutil Module, Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging,** Raising Exceptions, Getting the Traceback as a String, Assertions, Logging, IDLE's Debugger	https://www.youtube.com/watch?v=ARvOo4J_-NY https://www.youtube.com/watch?v=IMQhX3q9N1I https://www.youtube.com/watch?v=OGfvT0v5yK0&list=PLzjA1ql2imn8wGQzNbqkmm5gkou8CXCmI
4.	07.12.2022 to 27.12.2022	**Module 4:** **Classes and objects,** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying, **Classes and functions,** Time, Pure functions, Modifiers, Prototyping versus planning, **Classes and methods,** Object-oriented features, Printing objects, Another example, A more complicated example, The init method, The __str__ method, Operator overloading, Type-based dispatch, Polymorphism, Interface and implementation,**Inheritance,** Card objects, Class attributes, Comparing cards, Decks, Printing the deck, Add, remove, shuffle and sort, Inheritance, Class diagrams, Data encapsulation.	https://www.youtube.com/watch?v=5dRGRac8U3M https://www.youtube.com/watch?v=5dRGRac8U3M&list=PLfJ1JiIybz9vE8Z9K8mq7acXYJeMbc1dN https://www.youtube.com/watch?v=lV8Ja9dxsI8&list=PLbaSW4NhvJ1aBeJE1W84M89LRfhmZiAQn https://www.youtube.com/watch?v=sNHbGP9gE https://www.youtube.com/watch?v=Ge4mWrmHbw

8.	28.12.2022 to 19.01.2023	**MODULE-5:** **Web Scraping.** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module, Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module, Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics, Controlling the Browser with the selenium Module, **Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module, Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents, Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns, Charts, **Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs, Word Documents, **Working with CSV files and JSON data,** The csv Module, Project: Removing the Header from CSV Files, JSON and APIs, The json Module, Project: Fetching Current Weather Data	https://www.youtube.com/watch?v=D6ChniDBN8s https://www.youtube.com/watch?v=sEv_H04H63A https://www.youtube.com/watch?v=Lm37868CaYM&list=PL8snmXn7pVttwcQRtWahvGA7OfmGgNBd&v https://www.youtube.com/watch?v=3RBNPs9_O8g https://www.youtube.com/watch?v=1FEP_sNb62k https://www.youtube.com/watch?v=PKHSSqIMBE https://www.youtube.com/watch?v=nLmhmMNrxlM

Mr.Renukaradhya P C
Staff Incharge

Dr.Suhas G K
HOD, CSE

Dr. Narendra Viswanath
Principal

PRINCIPAL
SHRIDEVI INSTITUTE OF
ENGINEERING & TECHNOLOGY
TUMKUR - 572106.

SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT-JAN 2023) MICROSCHEDULE

ODD 22-23 [15]

SUBJECT	APPLICATION DEVELOPMENT USING PYTHON	STAFF NAME	Mr. RENUKARADHYA P C
SUBJECT CODE	18CS55	SEM/SEC	V
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	10/10/22	MON	**Module – 1 :Python Basics**, Entering Expressions into the Interactive Shell	Covered	
2	11/10/22	TUE	The Integer, Floating-Point, and String Data Types.	Covered	
3	12/10/22	WED	String Concatenation and Replication, Storing Values in Variables	Covered	
4	13/10/22	THU	**Flow control**, Boolean Values, Comparison Operators, Boolean Operators	Covered	
5	17/10/22	MON	Mixing Boolean and Comparison Operators, Elements of Flow Control.	Covered	
6	18/10/22	TUE	Program Execution, Flow Control Statements	Covered	
7	19/10/22	WED	Importing Modules,Ending a Program Early with sys.exit().	Covered	
8	20/10/22	THU	**Functions**, def Statements with Parameters, Return Values and return Statements,The None Value	Covered	
9	25/10/22	MON	Keyword Arguments and print().	Covered	
10	27/10/22	TUE	Local and Global Scope.	Covered	
11	31/10/22	WED	The global Statement, Exception Handling	Covered	

SUMMARY

PLANNED DATE	10.10.2022	TO: 31.10.2022	
ACTUAL CLASSES TAKEN	FROM: 10.10.22	TO: 31.10.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.Renukaradhya P C
Staff Incharge

Dr. Suma G. K
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
12	01/11/22	MON	**Lists.** The List Data Type, Working with Lists	Covered	
13	02/11/22	TUE	Augmented Assignment Operators, Methods	Covered	
14	03/11/22	WED	Example Program: Magic 8 Ball with a List	Covered	
15	04/11/22	THU	List-like Types: Strings and Tuples,References	Covered	
16	07/11/22	MON	**Dictionaries and Structuring Data.** The Dictionary Data Type,	Covered	
17	08/11/22	TUE	Pretty Printing	Covered	
18	09/11/22	WED	Using Data Structures to Model Real-World Things,	Covered	
19	10/11/22	THU	**Manipulating Strings.** Working with Strings	Covered	
20	15/11/22	MON	Useful String Methods,	Covered	
21	16/11/22	TUE	Project: Password Locker	Covered	
22	17/11/22	WED	Project: Adding Bullets to Wiki Markup adding bullets to wiki markup conti...	Covered	

SUMMARY

PLANNED DATE	FROM: 01.11.2022	TO: 17.11.2022	
ACTUAL CLASSES TAKEN	FROM: 1.11.22	TO: 17.11.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.Renukaradhya P C
Staff Incharge

Dr.Suhas G K
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
23	21/11/22	MON	**Pattern Matching with Regular Expressions,** Finding Patterns of Text Without Regular Expressions,	Covered	
24	22/11/22	TUE	Finding Patterns of Text with Regular Expressions	Covered	
25	23/11/22	WED	More Pattern Matching with Regular Expressions, Greedy and Nongreedy Matching,	Covered	
26	24/11/22	THU	The findall() Method, Character Classes, Making Your Own Character Classes	Covered	
27	28/11/22	MON	The Caret and Dollar Sign Characters, The Wildcard Character, Review of Regex Symbols, Case-Insensitive Matching	Covered	
28	29/11/22	TUE	Substituting Strings with the sub() Method, Managing Complex Regexes, Combining re.IGNORECASE, re .DOTALL, and re .VERBOSE	Covered	
29	30/11/22	WED	Project: Phone Number and Email Address Extractor, **Reading and Writing Files,** Files and File Paths	Covered	
30	01/12/22	THU	The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the pprint.pformat() Function	Covered	
31	02/12/22	MON	Project: Generating Random Quiz Files, Project: Multiclipboard, **Organizing Files,** The shutil Module	Covered	
32	05/12/22	TUE	Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style	Covered	
33	06/12/22	WED	Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File, **Debugging,** Raising Exceptions getting the traceback as a string assertions, logging IDLE's debugger	Covered	

SUMMARY

PLANNED DATE	FROM: 21.11.22	TO:06.12.22	
ACTUAL CLASSES TAKEN	FROM: 24.11.22	TO: 6-12-22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.Renukaradhya P C
Staff Incharge

Dr.Suhas G. K
HOD, ISE

Dr. Narendra Viswanath
Principal
SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY
JR - 572106

MODULE IV					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
34	07/12/22	MON	**Classes and objects,** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying	Covered	
35	08/12/22	TUE	**Classes and functions,** Time, Pure functions, Modifiers, Prototyping versus planning,	Covered	
36	12/12/22	WED	**Classes and methods,** Object-oriented features, Printing objects, Another example,	Covered	
37	13/12/22	THU	A more complicated example, The init method, The __str__ method, Operator overloading,	Covered	
38	14/12/22	MON	Type-based dispatch, Polymorphism, Interface and implementation	Covered	
39	15/12/22	TUE	**Inheritance,** Card objects, Class attributes	Covered	
40	20/12/22	WED	Comparing cards, Decks,		
41	21/12/22	THU	Printing the deck, Add, remove		
42	22/12/22	MON	shuffle and sort, Inheritance		
43	26/12/22	TUE	Class diagrams,		
44	27/12/22	WED	Data encapsulation		

SUMMARY

PLANNED DATE	FROM: 07.12.22	TO: 27.12.22	
ACTUAL CLASSES TAKEN	FROM: 7-12-22	TO:	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN:	
CONTENT COVERED FOR IA	IA 1:	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS:	TUTORIALS:	QP DISCUSSION:
	QUIZ:	SEMINARS:	ANY OTHER:

Mr.Renukaradhya P C
Staff Incharge

Dr. Sudhas G. K.
HOD, ISE

Dr. Narendra Viswanath
Principal

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MODULE V					
Sl. No.	**DATE**	**DAY**	**LESSON PLANNED**	**LESSON COVERED**	**REMARKS**
45	28/12/22	MON	**Web Scraping,** Project: MAPIT.PY with the webbrowser Module, Downloading Files from the Web with the requests Module		
46	29/12/22	TUE	Saving Downloaded Files to the Hard Drive, HTML, Parsing HTML with the BeautifulSoup Module		
47	02/01/23	WED	Project: "I'm Feeling Lucky" Google Search,Project: Downloading All XKCD Comics		
48	03/01/23	THU	Controlling the Browser with the selenium Module		
49	04/01/23	MON	**Working with Excel Spreadsheets,** Excel Documents, Installing the openpyxl Module,		
50	05/01/23	TUE	Reading Excel Documents, Project: Reading Data from a Spreadsheet, Writing Excel Documents		
51	09/01/23	WED	Project: Updating a Spreadsheet, Setting the Font Style of Cells, Font Objects, Formulas, Adjusting Rows and Columns.		
52	10/01/23	THU	**Working with PDF and Word Documents,** PDF Documents, Project: Combining Select Pages from Many PDFs		
53	11/01/23	MON	Word Documents, **Working with CSV files and JSON data,**		
54	12/01/23	TUE	The csv Module, Project: Removing the Header from CSV Files, JSON and APIs,		
55	19/01/23	WED	The json Module, Project: Fetching Current Weather Data		

SUMMARY

PLANNED DATE	**FROM: 28.12.22**	**TO: 19.01.23**	
ACTUAL CLASSES TAKEN	**FROM:**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

Mr.Renukaradhya P C
Staff Incharge

Dr.Suhas G K
HOD, ISE

Dr. Narendra V G
PRINCIPAL
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SIRA ROAD, TUMKUR- 572 106
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2022– JAN 2023) MACRO SCHEDULE

ODD 22 -23

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	19CS742	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

Course Outcomes or Cos

- Understand fundamentals of Big Data analytics
- Explore the Hadoop framework and Hadoop Distributed File system
- Illustrate the concepts of NoSQL using MongoDB and Cassandra for Big Data
- Employ MapReduce programming model to process the big data
- Understand various machine learning algorithms for Big Data Analytics, Web Mining and Social Network Analysis.

Sl. No.	DATE	MODULE LESSON PLAN	ADDITIONAL SOURCES
1	19.09.2022 to 10.10.2022	**Module-1:** Introduction to Big Data Analytics: Big Data, Scalability and Parallel Processing, Designing Data Architecture, Data Sources, Quality, Pre-Processing and Storing, Data Storage and Analysis, Big Data Analytics Applications and Case Studies. **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Introduction+to+Big+Data+Analytics
2	12.10.2022 to 05.11.2022	**Module-2** Introduction to Hadoop (T1): Introduction, Hadoop and its Ecosystem, Hadoop Distributed File System, MapReduce Framework and Programming Model, Hadoop Yarn, Hadoop Ecosystem Tools. Hadoop Distributed File System Basics (T2): HDFS Design Features, Components, HDFS User Commands. Essential Hadoop Tools (T2): Using Apache Pig, Hive, Sqoop, Flume, Oozie, HBase. **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Introduction+to+Hadoop
3	07.11.2022 to 24.11.2022	**Module -3:** NoSQL Big Data Management, MongoDB and Cassandra: Introduction, NoSQL Data Store, NoSQL Data Architecture Patterns, NoSQL to Manage Big Data, Shared-Nothing Architecture for Big Data Tasks, MongoDB, Databases, Cassandra Databases. **No. of Contact Sessions: 10**	https://www.youtube.com/results?search_query=%2A+NoSQL+Big+Data+Management%2C+MongoDB+and+Cassandra

4	26.11.2022 to 15.12.2022	**Module -4** MapReduce, Hive and Pig: Introduction, MapReduce Map Tasks, Reduce Tasks and MapReduce Execution, Composing MapReduce for Calculations and Algorithms, Hive, HiveQL, Pig **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=MapReduce%2C+Hive+and+Pig
5	17.01.2022 to 31.01.2022	**Module -5** Machine Learning Algorithms for Big Data Analytics: Introduction, Estimating the relationships, Outliers, Variances, Probability Distributions, and Correlations, Regression analysis, Finding Similar Items, Similarity of Sets and Collaborative Filtering, Frequent Itemsets and Association Rule Mining. Text, Web Content, Link, and Social Network Analytics: Introduction, Text mining, Web Mining, Web Content and Web Usage Analytics, Page Rank, Structure of Web and analyzing a Web Graph, Social Network as Graphs and Social Network Analytics. **No. of Contact Sessions: 11**	https://www.youtube.com/results?search_query=Machine+Learning+Algorithms+for+Big+Data+Analytics

TEXT BOOKS:

Text Books:

1. Raj Kamal and Preeti Saxena, "Big Data Analytics Introduction to Hadoop, Spark, and Machine-Learning", McGraw Hill Education, 2018 ISBN: 9789353164966, 9353164966

2. Douglas Eadline, "Hadoop 2 Quick-Start Guide: Learn the Essentials of Big Data Computing in the Apache Hadoop 2 Ecosystem", 1 stEdition, Pearson Education, 2016. ISBN13: 978-9332570351

REFERENCE BOOKS:

1) Tom White, **"Hadoop: The Definitive Guide"**, 4 Edition, O'Reilly Media,

2) Boris Lublinsky, Kevin T.Smith, Alexey Yakubovich,**"Professional Hadoop Solutions"**, 1 st Edition, Wrox Press, 2014ISBN-13: 978-8126551071

3) Eric Sammer,**"Hadoop Operations: A Guide for Developers and Administrators"**,1st Edition, O'Reilly Media, 2012.ISBN-13: 978-9350239261

4. Arshdeep Bahga, Vijay Madisetti, "Big Data Analytics: A Hands-On Approach", 1st Edition, VPT Publications, 2018. ISBN-13: 978-0996025577

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SIRA ROAD, TUMKUR- 572 106

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LESSON PLAN (OCT 2022 - JAN 2023) MICRO SCHEDULE

SUBJECT	BIG DATA ANALYTICS	STAFF NAME	RENUKARADHYA P C
SUBJECT CODE	17CS82	SEM/SEC	VII
IA Marks (CIE)	40 (Average of three tests for 30 marks and 10 marks for assignment)	Maximum Exam Marks (SEE)	60 (Question paper will be set and evaluated for 100 marks and later reduced to 60)

MODULE 1					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
1	19-09-22	MON	Introduction to Big Data Analytics: Big Data	Covered	
2	21-09-22	TUE	Scalability and Parallel Processing.	Covered	
3	22-09-22	WED	Designing Data Architecture	Covered	
4	24-09-22	THU	Designing Data Architecture	Covered	
5	26-09-22	MON	Data Sources, Quality	Covered	
6	28-09-22	TUE	Pre-Processing and Storing	Covered	
7	29-09-22	WED	Pre-Processing and Storing	Covered	
8	01-10-22	THU	Data Storage and Analysis	Covered	
9	03-10-22	MON	Data Storage and Analysis	Covered	
10	06-10-22	TUE	Big Data Analytics Applications and	Covered	
11	07-10-22	WED	Big Data Analytics Applications and	Covered	
12	10-10-22	THU	Case Studies.	Covered	

SUMMARY

PLANNED DATE	FROM: 19-09-22	TO: 10-10-22
ACTUAL CLASSES	FROM: 19.9.22	TO: 10.10.22

TAKEN			
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE II					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
13	12-10-22	TUE	**Module-2** Introduction to Hadoop (T1): Introduction	Covered	
14	13-10-22	WED	Hadoop and its Ecosystem	Covered	
15	15-10-22	THU	Hadoop Distributed File System.	Covered	
16	17-10-22	MON	MapReduce Framework and Programming Model	Covered	
17	19-10-22	TUE	Hadoop Yarn, Hadoop Ecosystem Tools.	Covered	
18	20-10-22	WED	Hadoop Distributed File System Basics (T2): HDFS Design Features	Covered	
19	22-10-22	THU	Components, HDFS User Commands	Covered	
20	31-10-22	MON	Essential Hadoop Tools (T2): Using Apache Pig	Covered	
21	02-11-22	TUE	Hive, Sqoop.	Covered	
22	03-11-22	WED	Flume, Oozie.	Covered	
23	05-11-22	THU	HBase.	Covered	

SUMMARY

PLANNED DATE	FROM: 12.10.2022	TO: 05.11.2022	
ACTUAL CLASSES TAKEN	FROM: 12.10.22	TO: 5.11.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2:	IA 3:
VALUE ADDITION TO	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓

THE MODULE	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE III					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
24	07-11-22	MON	**Module-3:** NoSQL Big Data Management,	Covered	
25	09-11-22	TUE	MongoDB and Cassandra: Introduction,	Covered	
26	10-11-22	WED	NoSQL Data Store	Covered	
27	12-11-22	THU	NoSQL Data Store	Covered	
28	14-11-22	MON	NoSQL Data Architecture Patterns	Covered	
29	16-11-22	TUE	NoSQL Data Architecture Patterns	Covered	
30	17-11-22	WED	NoSQL to Manage Big Data,	Covered	
31	19-11-22	THU	Shared-Nothing Architecture for Big Data Tasks,	Covered	
32	21-11-22	MON	Shared-Nothing Architecture for Big Data Tasks,	Covered	
33	23-11-22	TUE	MongoDB, Databases,	Covered	
34	24-11-22	WED	Cassandra Databases.	Covered	

SUMMARY

PLANNED DATE	FROM: 07.11.2022	TO: 24.11.2022	
ACTUAL CLASSES TAKEN	FROM: 7-11-22	TO: 24.11.22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1:	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSION: ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE IV					
SL No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
35	28-11-22	MON	MapReduce, Hive and Pig: Introduction	Covered	
36	28-11-22	TUE	MapReduce Map Tasks	Covered	
37	30-11-22	WED	MapReduce Map Tasks	Covered	
38	05-12-22	THU	Reduce Tasks and MapReduce Execution.	Covered	
39	07-12-22	MON	Reduce Tasks and MapReduce Execution.	Covered	
40	08-12-22	TUE	Composing MapReduce for Calculations and Algorithms	Covered	
41	10-12-22	WED	Composing MapReduce for Calculations and Algorithms	Covered	
42	12-12-22	THU	Composing MapReduce for Calculations and Algorithms	Covered	
43	14-12-22	MON	Hive, HiveQL, Pig	Covered	
44	15-12-22	TUE	Hive, HiveQL, Pig	Covered	

SUMMARY

PLANNED DATE	FROM: 26.11.2022	TO: 15.11.2022	
ACTUAL CLASSES TAKEN	FROM: 28.11.22	TO: 15-11-22	
NUMBER OF CLASSES	ALLOCATED: 11	TAKEN: 11	
CONTENT COVERED FOR IA	IA 1: ✓	IA 2: ✓	IA 3:
VALUE ADDITION TO THE MODULE	ASSIGNMENTS: ✓	TUTORIALS: ✓	QP DISCUSSIONS ✓
	QUIZ:	SEMINARS:	ANY OTHER:

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MODULE V					
Sl. No.	DATE	DAY	LESSON PLANNED	LESSON COVERED	REMARKS
45	17-12-22	MON	**Module -5** Machine Learning Algorithms for Big Data Analytics:	Covered	
46	17-12-22	TUE	Introduction, Estimating the relationships, Outliers, Variances,	Covered	
47	19-12-22	WED	Probability Distributions, and Correlations.	Covered	
48	21-12-22	THU	Regression analysis, Finding Similar Items,		
49	21-12-22	MON	Similarity of Sets and Collaborative Filtering,		
50	22-12-22	TUE	Frequent Itemsets and Association Rule Mining		
51	24-12-22	WED	Text, Web Content, Link, and Social Network Analytics:		
52	26-12-22	THU	Introduction, Text mining, Web Mining, Web Content and Web Usage Analytics,		
53	28-12-22	MON	Page Rank, Structure of Web and analyzing a Web Graph,:		
54	31-12-22	TUE	Social Network as Graphs and Social Network Analytics		

SUMMARY

PLANNED DATE	**FROM: 17.12.2022**	**TO: 31.12.2022**	
ACTUAL CLASSES TAKEN	**FROM: 17.12.22**	**TO:**	
NUMBER OF CLASSES	**ALLOCATED: 11**	**TAKEN:**	
CONTENT COVERED FOR IA	**IA 1:**	**IA 2:**	**IA 3:**
VALUE ADDITION TO THE MODULE	**ASSIGNMENTS:**	**TUTORIALS:**	**QP DISCUSSION:**
	QUIZ:	**SEMINARS:**	**ANY OTHER:**

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SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2022-23

PRACTICAL SESSION PLAN

OOD 22-23

Course: DBMS LABORATORY WITH MINI PROJECT Class: V Code: 18CSL58

Sl. No	Date	TOPIC	Remarks
1.	1st week	Demo on Simple SQL Queries, Practice on SQL Queries	
2.	2nd week	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	
3	3rd week	**Execution of Experiment-1**	
4.	4th week	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	
5.	5th week	**Execution of Experiment-2**	
6.	6th week	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	

7.	7th week	**Execution of Experiment-3**
8.	8th week	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.
9.	9th week	**Execution of Experiment-4**
10.	10th week	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 3 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.
11.	11th week	**Execution of Experiment -5, Project work**
12.	12th week	**Internals-II and Project work**
13.	13th week	**Project work**
14.	15th week	**Internals III and evaluation of project work**

[Mr. Renukaradhya P C]
Staff-Incharge

[Dr Basavesha D]
HOD, Dept of CSE

PRINCIPAL
SIET, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr. Renukaradhya P C **Class: V – B1(Tuesday)**
Course: DBMS LABORATORY WITH MINI PROJECT **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	11/10/22	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	18/10/22	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	
3	25/10/22	**Execution of Experiment-1**	
4.	01/11/22	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	
5.	08/11/22	**Execution of Experiment-2**	
6.	15/11/22	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	

7.	22/11/22	**Execution of Experiment-3**
8.	29/12/22	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.
9.	06/12/22	**Execution of Experiment-4**
10.	13/12/22	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.
11.	20/01/22	**Execution of Experiment -5, Project work**
12.	27/12/22	**Internals – II & Project work**
13.	03/01/23	**Project work**
14.	17/01/23	**Internals III and evaluation of project work**

[Mr. Renukaradhya P C]
Staff-Incharge

[Dr Basavesha D]
HOD, Dept of CSE

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Academic Year 2022-23

PRACTICAL SESSION PLAN

Course: DBMS LABORATORY WITH MINI PROJECT Class: V Class: V – B(Friday) Code: 18CSL58

Sl. No	Date	TOPIC	Remarks
1.	14-10-22	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	21-10-22	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jan 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	
3	28-10-22	**Execution of Experiment-1**	
4.	4-11-22	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	
5.		**Execution of Experiment-2**	
6.	11-11-22	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	

7.		**Execution of Experiment-3**	
8.	18-11-22	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.	
9.	25-11-22	**Execution of Experiment-4**	
10.	2-12-22	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.	
11.	9-12-22	**Execution of Experiment -5, Project work**	
12.	16-12-22	**Internals-II and Project work**	
13.	23-12-22	**Project work**	
14.	30-12-22	**Internals III and evaluation of project work**	

[Mr. Renukaradhya P C]
Staff-Incharge

[Dr Basavesha D]
HOD, Dept of CSE

PRINCIPAL
BET, TUMAKURU

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY, TUMKUR-06
(An ISO 9001:2000 Certified Institution)
DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING
Academic Year 2020-21

PRACTICAL SESSION PLAN

Staff: Mr. Renukaradhya P C **Class: V – B3[Wednesday]**
Course: DBMS LABORATORY WITH MINI PROJECT **Code: 18CSL58**

Sl. No	Date	TOPIC	Remarks
1.	12/10/22	**Demo on Simple SQL Queries , Practice on SQL Queries**	
2.	19/10/22	**Explanation of Experiment-1 with ER Diagram** Consider the following schema for a Library Database: BOOK(Book_id, Title, Publisher_Name, Pub_Year) BOOK_AUTHORS(Book_id, Author_Name) PUBLISHER(Name, Address, Phone) BOOK_COPIES(Book_id, Branch_id, No-of_Copies) BOOK_LENDING(Book_id, Branch_id, Card_No, Date_Out, Due_Date) LIBRARY_BRANCH(Branch_id, Branch_Name, Address) Write SQL queries to 1. Retrieve details of all books in the library – id, title, name of publisher, authors, number of copies in each branch, etc. 2. Get the particulars of borrowers who have borrowed more than 3 books, but from Jan 2017 to Jun 2017. 3. Delete a book in BOOK table. Update the contents of other tables to reflect this data manipulation operation. 4. Partition the BOOK table based on year of publication. Demonstrate its working with a simple query. 5. Create a view of all books and its number of copies that are currently available in the Library.	
3	02/11/22	**Execution of Experiment-1**	
4.	09/11/22	**Explanation of Experiment-2 with ER Diagram** Consider the following schema for Order Database: SALESMAN(Salesman_id, Name, City, Commission) CUSTOMER(Customer_id, Cust_Name, City, Grade, Salesman_id) ORDERS(Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id) Write SQL queries to 1. Count the customers with grades above Bangalore's average. 2. Find the name and numbers of all salesman who had more than one customer. 3. List all the salesman and indicate those who have and don't have customers in their cities (Use UNION operation.) 4. Create a view that finds the salesman who has the customer with the highest order of a day. 5. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.	
5.	16/11/22	**Execution of Experiment-2**	
6.	23/11/22	**Explanation of Experiment-3 with ER Diagram** Consider the schema for Movie Database: ACTOR(Act_id, Act_Name, Act_Gender) DIRECTOR(Dir_id, Dir_Name, Dir_Phone) MOVIES(Mov_id, Mov_Title, Mov_Year, Mov_Lang, Dir_id) MOVIE_CAST(Act_id, Mov_id, Role) RATING(Mov_id, Rev_Stars) Write SQL queries to 1. List the titles of all movies directed by 'Hitchcock'. 2. Find the movie names where one or more actors acted in two or more movies. 3. List all actors who acted in a movie before 2000 and also in a movie after 2015 (use JOIN operation). 4. Find the title of movies and number of stars for each movie that has at least one rating and find the highest number of stars that movie received. Sort the result by movie title. 5. Update rating of all movies directed by 'Steven Spielberg' to 5.	

7.	30/11/22	**Execution of Experiment-3**
8.	07/12/22	**Internals-I** **Explanation of Experiment -4 with ER-diagram** Consider the schema for College Database: STUDENT(USN, SName, Address, Phone, Gender) SEMSEC(SSID, Sem, Sec) CLASS(USN, SSID) SUBJECT(Subcode, Title, Sem, Credits) IAMARKS(USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to 1. List all the student details studying in fourth semester 'C' section. 2. Compute the total number of male and female students in each semester and in each section. 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects. 4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students. 5. Categorize students based on the following criterion: If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA< 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.
9.	14/12/22	**Execution of Experiment-4**
10.	21/12/22	**Explanation of Experiment-5 with ER-diagram** Consider the schema for Company Database: EMPLOYEE(SSN, Name, Address, Sex, Salary, SuperSSN, DNo) DEPARTMENT(DNo, DName, MgrSSN, MgrStartDate) DLOCATION(DNo,DLoc) PROJECT(PNo, PName, PLocation, DNo) WORKS_ON(SSN, PNo, Hours) Write SQL queries to 1. Make a list of all project numbers for projects that involve an employee whose last name is 'Scott', either as a worker or as a manager of the department that controls the project. 2. Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise. 3. Find the sum of the salaries of all employees of the 'Accounts' department, as well as the maximum salary, the minimum salary, and the average salary in this department 4. Retrieve the name of each employee who works on all the projects Controlled by department number 5 (use NOT EXISTS operator). 5. For each department that has more than five employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.
11.	28/12/22	**Execution of Experiment -5, Project work**
12.	04/01/23	**Internals-II and Project work**
13.	11/01/23	**Project work**
14.	18/01/23	**Internals III and evaluation of project work**

[Mr. Renukaradhya P C]
Staff-Incharge

[Dr SUHAS G K]
HOD, Dept of CSE

PRINCIPAL
BIET, DAVANAGERE