



## SYLLABUS FOR VALUE ADDED COURSE ON "NPL USING PYTHON"

### *Topics*

#### **Introduction and Overview**

what is Natural Language Processing, hands-on demonstrations. Ambiguity and uncertainty in language..

#### **Regular Expressions**

Chomsky hierarchy, regular languages, and their limitations. Finite-state automata. Practical regular expressions for finding and counting language phenomena..

#### **Programming in Python**

An introduction to programming in Python. Why Python? Variables, numbers, strings, arrays, dictionaries, conditionals, iteration. The NLTK (Natural Language Toolkit), with demonstrations.

#### **String Edit Distance and Alignment**

Key algorithmic tool: dynamic programming, first a simple example, then its use in optimal alignment of sequences. String edit operations, edit distance, and examples of use in spelling correction, and machine translation.

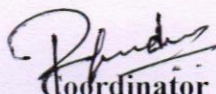
#### **Assessment:**

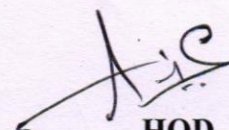
##### **Students should obtain:**

Min 80% of attendance

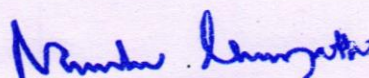
Min 80% Participation in practice session

Quiz

  
Coordinator

  
HOD

HOD  
Dept of E&C  
SIET, Tumkur-6

  
PRINCIPAL  
SIET, TUMKUR