



P.S.R. ENGINEERING COLLEGE, SIVAKASI – 626 140.

(An Autonomous Institution, Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VALUE ADDED COURSE

VAC17CS02 – PYTHON

Course Objectives:

- To acquire programming skills in core Python.
- To acquire Object Oriented Skills in Python
- To develop the skill of designing Graphical User Interfaces in Python
- To develop the ability to write database applications in Python

Course Outcomes:

After successful completion of this course, students will be able to:

- CO1:** Understand Introduction of python programming.
- CO2:** Develop functions in python.
- CO3:** Understand strings and lists in python programs.
- CO4:** Analyze OOPS Concept in python.
- CO5:** Demonstrate tuples, dictionaries, files and exceptions in python.
- CO6:** Understand the built-in objects of Python.

Course Syllabus:

Day 1: Python Basics

- Introduction to Python
- Sequences and File Operations
- Deep Dive – Functions, OOPs, Modules, Errors and Exceptions

Day 2: Data Handling

- Introduction to NumPy, Pandas and Matplotlib
- Data Manipulation

Day 3: Introduction to Machine Learning with Python

- Supervised Learning - I
- Dimensionality Reduction
- Supervised Learning - II
- Unsupervised Learning

Day 4: Association Rules Mining and Recommendation Systems

- Reinforcement Learning
- Time Series Analysis
- Model Selection and Boosting

Day 5: Database Connectivity

- An introduction to relational databases,
- SQL statements for data manipulation
- Using Python to work with a database