Vishnu Waman Thakur Charitable Trust's
VIVA Institute of Technology
Approved by AICTE New Delhi, Recognized by DTE, Govt. of Maharashtra
And Affiliated to University of Mumbai
ACCREDITED by NAAC with "B++" Grade

Department of Electrical Engineering

Report on Spyder Software and Python Programming for Electrical Engineers

Bridge Course Title: Spyder Software

Instructor: Mr. Amitkumar Vishwakarma (Asst. Professor)

Conducted for: Second Year Engineering Students

Semester: IV (AY 2024-25)

Total Students: 32

Total Lectures Conducted: 30

Summary:

The course "Spyder Software and Python Programming for Electrical Engineers" is designed to equip second-year Electrical Engineering students with practical programming knowledge using the Spyder IDE and Python. Conducted over 30 lectures, the course introduces students to Python fundamentals, data analysis techniques, numerical simulations, and real-world engineering applications with a focus on electrical systems.

Objective:

- To familiarize students with the Spyder IDE and Python programming, enabling them to analyze and solve basic engineering problems using computational tools.
- To develop the skills to apply Python-based tools to numerical methods, data analysis, and real-world electrical engineering applications.

Outcome:

By the end of the course, students will be able to:

- Set up and efficiently use the Spyder IDE for engineering problem-solving.
- Develop and run Python scripts for mathematical and logical operations.
- Analyze and visualize engineering data using Pandas, Matplotlib, and Seaborn.
- Solve algebraic and differential equations relevant to electrical systems.
- Perform load flow analysis and signal processing through Python-based simulations.
- Apply debugging, profiling, and code optimization techniques to enhance computational efficiency.

Mr. Amitkumar Vishwakarma
Subject In Charge