

SEC syllabus in Physics for Semester I

Paper: SEC I:

Basic Programming and Presentation

Course Objective

- To introduce students to the fundamentals of programming and presentation tools.
- To equip students with the skills to write simple programs and create professional presentations.
- To foster problem-solving and logical thinking through programming.

Learning Outcomes

- ❖ Demonstrate an understanding of programming fundamentals and syntax.
- ❖ Use Python effectively for basic programming tasks.
- ❖ Create visually appealing and well-structured presentations using Microsoft PowerPoint.

Basic Programming and Presentation: Credits: 3 Total Lectures: 90

Module: -1

Introduction to Programming: What is programming? Overview of Compilers, Interpreters, Assemblers, Machine Language, High-Level Language, and Object-Oriented Programming. Introduction to different types of programming languages.

Writing and running the first program ("Hello World")

Understanding basic syntax and its significance.

Module: -2

Python Programming

Importance of Python and reasons for its popularity. Installation of Python and its interpreter.

Variables and Data Types in Python: Integer, Float, String, Boolean. Basic Input and Output operations. Operators, Conditional Statements, and Loops for control flow.

Module: -3

Microsoft PowerPoint:

Overview of Microsoft PowerPoint interface. Creating, saving, and managing presentations. Understanding slides, slide layouts, and components. Adding and formatting text and designing slides. Utilizing slide transitions and animations for enhanced visual effects.

Module: -4

Writing and executing simple Python programs to solve specific tasks.

Creating a complete, professional-quality presentation using Microsoft PowerPoint tools and techniques.

Resources:

- ✓ Scientific computing in python, 2nd Edn, A. K. Gupta, 2021, Techno World.
- ✓ Microsoft PowerPoint 2019 Step by Step" by Joan Lambert.
- ✓ YouTube tutorials on PowerPoint features.