PC 403 IT   **SCRIPTING LANGUAGES**

Instruction: 4 Periods per week
Duration of University Examination: 3 Hours
University Examination(SEE):   70 Marks
Sessionals(CIE):   30 Marks

Course Objectives:
1. To understand why Python is a useful scripting language for developers.
2. To learn how to design and program Python applications.
3. To learn how to use lists, tuples, and dictionaries in Python programs.
4. To learn how to write loops and decision statements in Python.
5. To learn how to write functions and pass arguments in Python.
6. To learn how to read and write files in Python.

Unit- I
INTRODUCTION: Origin of Scripting , Scripting Today, Definition of scripting language, Characteristics of Scripting Languages, Uses for Scripting Languages, How scripting languages differ from non-scripting languages; Types of scripting languages.

Unit- II
Introduction to Python: Python - History Language Features, Installing Python, Environment Setup, Running a Python Script, Python Versions: 2.x vs. 3.x,
Data Types, Operators, Expressions- Comments Indentation, Built-in Data Types, Variables, Operators, Expressions.

Unit-III
Control Statements: if Statements for Statement, while Statement, Use of range () in for loop, Use of break, continue, else in Loops, Use of pass Statement
Standard I/O Operations Input from Standard Input Device, Output to Standard Output Device   Formatting String with %, Formatting string with format()

Unit-IV
Sequences, Strings: Lists, Tuples, Sets, Dictionaries, Strings and String Operations.
Functions: Function Definitions, Function Calling, DocStrings, Local Variables and Global Variables, Built-in Functions

Unit-V
File Handling: Opening modes, with statement, Closing a file, File read positions in Python, Renaming and deleting files in Python, The rename() method, The remove() method, Python file object methods.

Suggested Reading:
1. Martin C Brown, "Python: The Complete Reference", McGrawHill Education,2001.
2. Mark Chen, **"**Python: The Ultimate Beginner's Guide for Becoming Fluent in Python Programming", CreateSpace Independent Publishing Platform, October 2016.