CS – 27 Basic Python

Unit : 1 – Introduction to Python

- Python History, Features & Installation
- Basic Syntax, Indentation, Reserved Words, Naming Conventions
- Python Variables & Data Types
- Literals
- Operators
- Comments
- Simple Input and Output, print() function
- Python Conditional Statements
- Python Loops : for loop, while loop, break statement, continue statement
- Executing Python from the Command Line, IDLE, Editing Python Files
- Python Functions
- Defining Your Own Functions, Parameters, Keyword and Optional Parameters
- Python Modules

Unit : 2 – File Handling & Data Types

- Python Files I/O
- Python Strings
- Python Lists
- Python Tuples
- Python Sets
- Python Dictionary

Unit : 3 – OOP using Python, Sorting & Searching with Python

- Handling Exceptions
- Exceptions as a control flow mechanism
- Assertions
- Abstract Data Types and Classes
- Inheritance
- Encapsulation and Information Hiding
- Search Algorithms (Linear, Binary)
- Sorting Algorithms (Selection, Bubble, Insertion, Shell, Quick)
- Hashtables

Unit : 4 - Regular Expressions

- Special Symbols and Characters
- Regexes and Python
- A Longer Regex example
- Text Processing:
    - Comma Separated Values (CSV files)
    - JavaScript Object Notation (JSON)
    - Python and XML

Unit : 5 - Python with MySQL

- Environment Setup
- Database Connection
- Creating New Database
- Creating Tables
- Insert Operation
- Read Operation
- Update Operation
- Join Operation
- Performing Transactions

	Class Room	Seminar	Expert Talk	Test	Total
No. Of Lecture	**60**	**05**	**05**	**05**	**75**

Reference Books :

1) Python: The Complete Reference
2) Python Programming Fundamentals- A Beginner's Handbook
3) Core Python Programming

Reference Website

1) https://www.tutorialspoint.com/python
2) https://www.w3schools.com/python
3) https://docs.python.org/3/tutorial
4) https://www.guru99.com/python-tutorials.html
5) https://www.programiz.com/python-programming/tutorial
6) https://www.learnpython.org
7) https://realpython.com/tutorials/python