



COURSE TITLE : COMPUTING FUNDAMENTALS (PRACTICAL)
COURSE CODE : 1008
COURSE CATEGORY : C
PERIODS/WEEK : 5 (2 THEORY+ 3 PRACTICAL)
PERIODS/SEMESTER : 75
CREDITS : 4

TIME SCHEDULE

MODULE	TOPICS	PERIODS
1	Computer Fundamentals – Hardware and Software	14
2	Office Automation Tools	14
3	Basic Programming Concepts	22
4	Introduction to programming using python	25
Total		75

COURSE OUTCOME:

On completion of the course the student will be able :

- Understand Computer Fundamentals – hardware and Software
- Understand computer networks
- Study Office automation tools
- Email and search engines
- Basic Programming Concepts
- Introduction to programming in Python



SPECIFIC OUTCOME

MODULE - I TO UNDERSTAND THE COMPUTER FUNDAMENTALS – HARDWARE AND SOFTWARE

- 1.1.1 Identify computer hardware and software (in the lab)
- 1.1.2 Draw and explain the block diagram of computer system
- 1.1.3 Demonstrate various peripherals and their applications.
- 1.1.4 Demonstrate the usage of various storage devices (data copying, CD/DVD burning)
- 1.1.5 Illustrate the booting procedure (using windows and linux)
- 1.1.6 Identify various operating system file management commands (create, copy, move, delete and rename folders and files)
- 1.1.7 Demonstrate installation of application software (in windows and linux)
- 1.1.8 Identify various computer languages
- 1.1.9 Differentiate the compiler and interpreters
- 1.1.10 State computer networks and internet.

MODULE - II TO APPLY OFFICE AUTOMATION TOOLS

- 2.1.1 Demonstrate how a document to be prepared and formatted
- 2.1.2 Demonstrate how a spread sheet to be prepared and calculations are performed
- 2.1.3 Demonstrate how presentations are prepared.
- 2.1.4 Demonstrate how to create email-id and uploading and downloading files.

MODULE - III TO UNDERSTAND BASIC PROGRAMMING CONCEPTS

- 3.1.1 Identify various problem solving steps
- 3.1.2 Design algorithm and flowchart for simple sequential problems.
- 3.1.3 Design algorithm and flowchart for control structures (decision making and iterative)

MODULE - IV TO DEVELOP PROGRAMS USING PYTHON

- 4.1.1 Demonstrate output functions and input function for a simple application
- 4.1.2 Modify the applications with inserting control logic (if, else, elif)
- 4.1.3 Modify the applications with inserting looping control(while, for)
- 4.1.4 Write programs for a simple total/average mark calculation and calculation of grade based on boundary conditions.



CONTENT DETAILS

List of Experiments :

1. Identify the internal and external hardware/peripheral components
2. Familiarisation with operating system along with file management commands like create, copy, move, delete and rename files and folders.
3. Prepare and print Bio-data with a covering letter using word processor.
4. Calculation of Total mark, grade based on boundary conditions for n number of students using Spread sheet.
5. Experiments for burning the contents in to optical disks.
6. Preparation of presentation (with transition and animations , insertion of scanned images and internet contents)
7. Email id creation, sending and receiving of email with attachments.
8. Programs to calculate average of 3 numbers, area of triangle, volume of cylinder, Temperature conversion.
9. Largest of 3 numbers, Check whether even or odd, Roots of quadratic equation, Character name of the day.
10. Print natural numbers, Factorial value, Multiplication table, Sum of digits, Sum of a set of numbers, calculation of grade based on boundary conditions

Text Book(s):

1. Rajaraman V. - Fundamentals of Computers - PHI

References:

1. Mrs. Chetna Shah & Mr. Kalpesh Patel - Open Office

Hardware Requirement : Desk Top Computer
Operating System.