

M4PHY07-SP02E: Skill Enhancement Course :

Programming in C

(At the beginning of the semester, students must be provided: Detailed Lecture schedule of topics to be covered in each lecture, tutorial topics, clearly defining chapters/sections of reference books followed, link to web resources etc. Examiners are expected to take into consideration the lecture schedule while setting the question papers to ensure questions are set within scope of the syllabus)

External: 80 Marks

Internal: 20 marks

Contact hours: 40hrs

Note:

- a. The practical aspects of the course must be taught as laboratory instructions using computers.
- b. Teacher is required to ensure that students carry out the computer implementation of the algorithm/program in the laboratory as a part of this course.
- c. Five assignments and five internal assessments (practical), one from each unit are to be carried out

UNIT - I

Algorithm development: Steps in program design, Problem identification, algorithms, flow chart, top-down and bottom up design.

BASICS OF C: Structure of a C program, C tokens, identifiers, character set, keywords, basic I/O data types and sizes. Constants, variables, special symbols

UNIT – II

Operators: Arithmetic, relational and logical operators, increment and decrement operators, conditional operator, assignment operators, expressions, bit wise operators

Conditional statements: Two-way: if, if- else, null else, nested if, Multi-way : switch, else-if.

UNIT – III

Iterative: Loops - for, while and do-while, break, continue, initialization and accessing, nested loops, exit (), goto statements

UNIT – IV

Functions: built-in and user-defined functions function declaration, parameter passing- call by value & call by reference, recursive functions.

Storage classes - auto, extern, global and static.

UNIT – V

Array: one dimensional and multi-dimensional array, array handling, passing arrays to functions, arrays and strings, string-handling functions.

Recommended books :

- *Yashavant P. Kanetkar, Let us C*
- *E Balagurusamy, Programming In Ansi C*

LIST OF SAMPLE PRACTICAL PROGRAMS:

Note: Students are required to perform all the experiments.

Unit 1

1. C Program Print Hello Word
2. C Program Declaring Variable and Printing its Value
3. C Program to perform arithmetic operation.
4. C Program to Calculate Area and Circumference of Circle
5. C Program to Calculate Area of Rectangle
6. C Program to Calculate Area of Square
7. C Program to Convert temperature from degree centigrade to Fahrenheit
8. C Program to Swap of two no's without using third variable

Unit -2

1. C Program to check enter number is even or odd
2. C program to check enter year is Leap year or not
3. C Program to check enter character is vowel or consonant.
4. C Program to Find greatest in 3 numbers
5. C Program to Calculate sum of 5 subjects and Find percentage
6. C Program to Find the simple interest.
7. C Program to Solve Second Order Quadratic Equation.