

**Department of Computer Science & Engineering**

**Subject Name: Computer Programming Language      Semester: Third**

**Subject Code: ETCE/ CPGM/ S3**

**Faculty Members: Moumita Samanta(MS),Susmita Biswas(SB),Mrinal Maity(MM),Santunu Saha(SS),Antara Ghosh(AG)**

| <b>UNIT</b> | <b>HOURS</b> | <b>TOPICS</b>                                 | <b>COURSE CONTENT</b>  |
|-------------|--------------|---|--|
| 1           | 4            | Introduction to Programming and overview of C | 1.1 CONCEPT OF PROGRAMMING LANGUAGES AND EXAMPLES<br>1.2 Algorithm and flowcharts<br>1.3 Compiler, Interpreter, Loader, and Linker<br>1.4 Source Code and Object Code<br>1.5 Place of C in computer language<br>1.6 Basic Structure of C   |
| 2           | 7            | Types, Operator & Expression                  | 2.1 C character set, tokens, constants, variables. keywords<br>2.2 PRIMARY DATA TYPES – their equivalent keywords and declaration<br>2.3 OPERATORS: Arithmetic – Increment – Decrement – Relational – Logical – Conditional – Bit Wise<br>2.4 Assignment statement- C expressions-operator precedence<br>2.5 UNFORMATTED I / O FUNCTIONS: getchar ( ) – getch ( ) – putchar ( ) – putch ( ) – gets ( ) – puts()<br>2.6 FORMATTED CONSOLE I / O: printf ( ) – scanf ( ) |
| 3           | 6            | Control Flow (Decision Making)                | 3.1 Introduction<br>3.2 IF-ELSE statement<br>3.3 Looping : FOR, WHILE and DO-WHILE statements<br>3.4 BREAK, CONTINUE and GOTO statements.<br>3.5 Simple Program  |
| 4           | 8            | Arrays & Pointers                             | 4.1 Introduction<br>4.2 Declaration and initialization of Array<br>4.3 Accessing of array elements and other allowed operations.<br>4.4 Simple program with a one dimensional array<br>4.5 Understanding pointers, declaring and accessing pointer , '&' and '*' operators<br>4.6 Pointer expressions – Pointer assignments – Pointer arithmetic   |
| 5           | 5            | Function                                      | 5.1 The concepts of functions<br>5.2 Using functions : i) Function Declaration, ii) Function Definition, iii) Function Call<br>5.3 Simple program  |