MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB

Syllabus for Bachelor of Computer Application (BCA) Programme
(Effective for Students Admitted in Academic Session 2018-2019)

Paper: C Programming
Code : BCAN-103
Contacts Hours / Week : 4L+1CE
Credits : 4

1. Module I: Programming Basics (2L) Problem analysis, Flowchart, algorithms, Pseudo codes, structured programming, Example of Flowchart and Algorithm representation, Brief History of Development of C language, Features of C language, Process of compiling and running a C program.
2. Module II: Variable and Constants (4L) Definition of Tokens, variables, Constant, Classification of constants, data types (Primary data types, User defined data types, Derived data types)
3. Module III: Operators and Expressions (6L) Different types of Operators (Arithmetic, Relational, Logical, Assignment, Increment and Decrement, Conditional, Bitwise, Special), expressions, type conversion, Operator precedence, associatively rules on operators.
4. Module IV: Formatted Input/output (4L) scanf() Format code, printf() Format code, reading and writing character variable, character testing functions (isdigit(), islower(), isupper(), tolower(), toupper()).
5. Module V: Decision Making And Branching (5L) If statement, if..else, Nested if..else, else if ladder, switch, ternary operator, goto statement (forward and backward jump)
6. Module VI: Looping (5L) Different types of loop (while, for, do), entry control loop, exit control loop, Applying break and continue within loop.
7. Module VII: Array (4L) One dimensional array, Two dimensional array, Example using integer and floating array.
8. Module VIII: String (3L) Character Array, Library functions related to string (strcat(), strcmp(), strcpy(), strlen())
9. Module IX: Function (4L) Definition, Standard library functions, user-defined functions, recursion, scope of variables in function (auto, extern, static, register)
10. Module X: Pointer And Header File (3L) Pointer Definition, pointer expression, pointer to an array, pointer to a function. Definition of Header file, Use of header files, Different header files.

Suggested Readings:

1. Programming in ANSI C by E Balagurusamy

2. Programming With C, Gottfried, TMH

3. The C Answer Book, Tondo, PHI

4. Programming & Problem Solving Through C Language, EXCEL BOOKS