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| **Learning**  **Outcomes** | **Course Contents** | **Teaching Learning Strategy** | **Assessment Strategy** |
| **Convert** number system  **Discuss** logic gates & C**onstruct** simple circuits | **Number System& Logic Gates**: Number system, codes, Boolean algebra, and logic gates. | Lecture | Quiz  Test  Assignment |
| **Describe** h/w components,  **Explain** functional relation of components | **Hardware:** Basic components of a digital computer, I/O unit, CPU, peripheral devices. Computer Hardware Organization, Bus organized architecture;CPU Organization, Memory devices. | Lecture  Demonstration | Quiz  Presentation |
| **Define** s/w,  **Identify** applications | **Software:** Basic concepts; classification; system and application software | Lecture  Discussion | Quiz  Presentation |
| **Describe** DBMS **Lis**t Multimedia | **Database & Multimedia:** Basic conception of DBMS, audio, video& graphics. | Lecture | Quiz |
| **Describe** networks application  **Explain** networks | **Networking:** Different types of Networks, network topologies. Communication media. Internet: Internet service, e-mail e-commerce. | Lecture | Assignment |
| **Define** computer languages  **Summarize** languages | **Computer languages:** Introducing computer languages, machine language, assembly language**,** High-level language, language translator-interpreter, compiler and assembler. | Lecture | Quiz  Test |
| **Explain** the programming constructs.  **Implement** basic logic in programming | **Introduction to C Programming:** input, output, variables, data type, operators and expressions, basic algorithm build-up, flowcharts and pseudo-coding | Lecture  PBL (Problem Based Learning) | Quiz  Test  Assignment |
| **Analyze** problem and derive solution | **C Programming:** control statement, looping, array, Problem analysis and solution | Lecture  PBL | Quiz  Assignment |
|  | |  | | --- | | **Introduction:** Need for multifunction programs, return values, types and some examples, Calling functions and arguments, Recursions, passing arrays to functions, Storage class. | | **Array:** Introduction to arrays. One-dimensional array. Some sample programs, Two-dimensional array. Some sample programs, String handling in C and some examples. | | | **Structure and Union:** | | Definition of Structure, Union, Structure union applications, Self-referential Structure, Linked list, Array of structure and some examples. | | **Pointer:** | | Understanding pointers, Pointers and arrays. Dynamic memory allocation, Pointers and functions, pointers and structures, Some special features of C (Macros, Enumerations), Bitwise operations. | | **File management:** | | File management concept in C, Defining, opening and closing a file, Input/output operations in file, Error handling and command line arguments, Introduction to graphics, Drawing some geometric objects. | |  |  |

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