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| **Sl. No** | **Syllabus** | **Curriculum** | **Deployment Strategy and****Tool** | **Cross-cutting issues****integrated** | **PO, PSO and CO** | **Attainment Verification** |
| 1. | DISCRETE MATHEMATICAL STRUCTURES | * Concepts and notations from discrete mathematics are useful in studying and describing objects and problems in all branches of computer science, such as computer algorithms, programming languages, cryptography, automated theorem proving, and software development.
* Discrete math can be used for software design specifications, analysis of algorithms, and other practical applications, but it's really a great tool to develop as a programmer.
* The mathematics of modern computer science is built almost entirely on discrete math, in particular combinatorics and graph theory. This means that in order to learn the fundamental algorithms used by computer programmers, students will need a solid background in these subjects.
 | 1. Chalk and

Talk method1. PPT
 | * Business

 Ethics* Human

 values | PO1:Engineering KnowledgePO2:Problem AnalysisPO4:Conduct Investigations Of Complex ProblemsPO6: Engineer and SocietyPO12: Life-longLearning. |  |
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|  |  | PSO2:Problem Solving Skill |
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|  |  | Co1:Verify the correctness of an argument using propositional and predicate logic, truth tables and rules of inference, also understand the use of quantifiers. |
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|  |  | CO2: Demonstrate the ability to prove various concepts using different proof techniques. |
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|  |  | CO3: Demonstrate the ability to solve problems using Mathematical Induction, recursive definition and counting techniques on combinatorics in the context of discrete probability  |
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|  |  | CO4: Understand theoretical concepts on relations, operation on functions and apply the properties of functions to problems. |
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|  |  | CO5:Solve problems under principle of inclusion and exclusion, derangements, rook polynomials and recurrence relations. |
|  |  | CO6:Compare graph and trees, and understand the applications of graph theory in computer science. |

