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| **Sl. No** | **Syllabus** | **Curriculum** | **Deployment Strategy and**  **Tool** | **Cross-cutting issues**  **integrated** | **PO, PSO and CO** | **Attainment Verification** |
| 1. | Automata Theory and Computability | 1. Formal Languages and Automata theory presents the theoretical aspects of computer science, and helps define infinite languages in finite ways; construct algorithms for related problems and decide whether a string is in language or not. 2. Each model in automata theory plays important roles in several applied areas. Finite automata are used in text processing, compilers, and hardware design. Context-free grammar (CFGs) are used in programming languages and artificial intelligence. 3. Automatic photo printing machines, artificial card punching machine, human detection and reorganization machine etc. are the real time examples of automata. | 1. Chalk and   Talk method   1. PPT | * Business   Ethics   * Human   values | PO1:Engineering Knowledge  PO2:Problem Analysis  PO3:Design/Development Of Solutions  PO4:Conduct Investigations Of Complex Problems |  |
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|  |  | PSO2:Problem Solving Skill |
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|  |  | **CO1:Explain** the core concepts in Automata theory and Theory of Computation  **CO2:Construct** Grammars and Automata for various language classes like RL’s, CFL’s and Decidable Languages.  **CO3:Develop** skills in formal reasoning and become knowledgeable about restricted models of computation such as Regular and Context free.  **CO4:Analyse** different computational models and **translate** between various models.  **CO5:Apply** formal mathematical approaches to prove properties of languages, grammars and Automata. |
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