Curriculum Planner

(Department of Computer Science Kalindi College)

**Course :B.Sc (H) Computer Science**

**Semester : IV**

**Paper Name : Software Engineering**

**Name of the Teacher: Ms. Sweety**

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|  | Topic | Approximate (schedule) |
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|  Unit 1: Introduction  |
|  Software Engineering - A Layered Approach; Software Process – Process Framework, Umbrella Activities; Process Models – Waterfall Model, Incremental Model, and Evolutionary process Model (Prototyping, Spiral Model); Introduction to Agile – Agility Principles, Agile Model – Scrum. Unit 2: Software Requirements Analysis and Specifications Use Case Approach, Software Requirement Specification Document |

 | January 2022 |
| 2 | Unit 2: Software Requirements Analysis and Specifications

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|  Flow oriented Modeling, Data Flow Modeling, Sequence Diagrams Unit 3: Design ModelingTranslating the Requirements model into the Design Model, The Design Process, Design Concepts: Abstraction, Modularity and Functional Independence; Architectural Mapping using Data Flow. |

Problem discuss with students time to time .Assignment | February 2022 |
| 3 | Unit 4: Software Metrics and Project Estimations Function based Metrics, Software Measurement, Metrics for Software Quality; Software Project Estimation (FP based estimations, COCOMO II Model); Project Scheduling (Timeline charts, tracking the schedule). Unit 5: Quality Control and Risk Management Quality Control and Quality Assurance, Software Process Assessment and Improvement Capability Maturity Model Integration (CMMI); Software Risks, Risk Identification, Risk Projection and Risk Refinement, Risk Mitigation, Monitoring and Management.Problem discuss with students time to timeAssignment

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 | March 2022 |
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| Unit 6 : Software Testing Strategic Approach to Software Testing, Unit Testing, Integration Testing, Validation Testing, System Testing; Black-Box and White Box Testing, Basis Path Testing  |

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Take presentation of project of each student | April 2022 |