

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**LECTURE SCHEDULE**

# CLASS : II B.TECH - II SEMESTER REGULATION: R16

# BRANCH : Computer Science & Engineering

**SUBJECT** : Software Engineering

**ACADEMIC YEAR** : 2017 - 2018

**FACULTY** : Mr NAGARAJU.K

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| **UNIT No. & Name** | **Topic** | **No. Of Classes**  (Hours required) |
| **UNIT - I :**  **Software and Software Engineering and Process Models**: | **Lecture 1:** The Nature of Software  **Lecture 2,3,**The Unique Nature of WebApps  **Lecture 4:** Software Engineering  **Lecture 5:** Software Process  **Lecture 6:** Software Engineering Practice  **Lecture7 :** Software Myths.  **Lecture8:** A Generic Process Model  **Lecture9 :** Process Assessment and Improvement  **Lecture 10,11:** Prescriptive Process Models  **Lecture 12:** Specialized Process Models  **Lecture 13:** The Unified Process  **Lecture 14:** Personal and Team Process Models  **Lecture 15:** Process Terminology, Product and Process. | 16 |
| **UNIT - II :**  **Requirements Analysis And Specification and Software Design** | **Lecture 16,17:** Requirements Gathering and Analysis  **Lecture 18,19:** Software Requirement Specification (SRS)  **Lecture 20:** Formal System Specification. **Lecture 21:** Overview of the Design Process  **Lecture 22:** How to Characterise of a Design?  **Lecture 23:** Cohesion and Coupling  **Lecture 2**4:Layered Arrangement of Modules  **Lecture 25** Approaches to Software Design | 10 |
| **UNIT - III :**  **Function-Oriented Software Design and User Interface Design** | **Lecture 26:** Overview of SA/SD Methodology  **Lecture 27** Structured Analysis  **Lecture 28,29:** Developing the DFD Model of a System  **Lecture 30:** Structured Design, Detailed Design  **Lecture 31:** Design Review  **Lecture 32:** over view of Object Oriented design.  **Lecture 33:** Characteristics of Good User Interface  **Lecture 34:**Basic Concepts, Types of User Interfaces  **Lecture 35:**Fundamentals of Component-based GUI Development  **Lecture 36:** A User Interface Design  Methodology. | 11 |
| **UNIT - IV :**  **Coding And Testing** | **Lecture 37:** Coding, Code Review  **Lecture 38,39:** Software Documentation, Testing, Unit Testing,  **Lecture 40:** Testing, Unit Testing,  **Lecture 41,42:** Black-Box Testing, White-Box Testing,  **Lecture 43:** Debugging, Program Analysis Tools  **Lecture 44:** Integration Testing,  **Lecture 45:** Testing Object-Oriented Programs  **Lecture 46:** System Testing  **Lecture 47:** Some General Issues Associated with Testing | 11 |
| **UNIT - V:**  **Software Reliability And Quality Management and**  **Computer Aided Software Engineering** | **Lecture 48:** Software Reliability, Statistical Testing  **Lecture 49:** Software Quality, Software Quality Management System  **Lecture 50,51:**  ISO 9000 SEI Capability Maturity Model.  **Lecture 52:** Case and its Scope  **Lecture 53:** Case Environment  **Lecture 54:** Case Support  in Software Life Cycle  **Lecture 55:** Other Characteristics of Case Tools  **Lecture 56:** Towards Second Generation CASE Tool  **Lecture 58:** Architecture of a Case Environment | 10 |
| **UNIT - VI :**  **Software Maintenance and Software Reuse** | **Lecture 59:** Software maintenance  **Lecture60:** Maintenance Process Models  **Lecture 61,:** Maintenance Cost  **Lecture62:** Software Configuration Management  **Lecture 63:** what can be reused?  **Lecture 64:** Why almost No Reuse So Far?  **Lecture 65:** Basic Issues in Reuse  Approach  **Lecture 66:** Reuse at Organization Level | 8 |
| **Total number of classes required: 66** | | |

**TEXT BOOKS:**

1. Software engineering A practitioner’s Approach, Roger S. Pressman, Seventh Edition

McGrawHill International Edition.

2. Fundamentals of Software Engineering, Rajib Mall, Third Edition, PHI.

3. Software Engineering, Ian Sommerville, Ninth edition, Pearson education

**Signature of the Faculty Signature of the HOD**