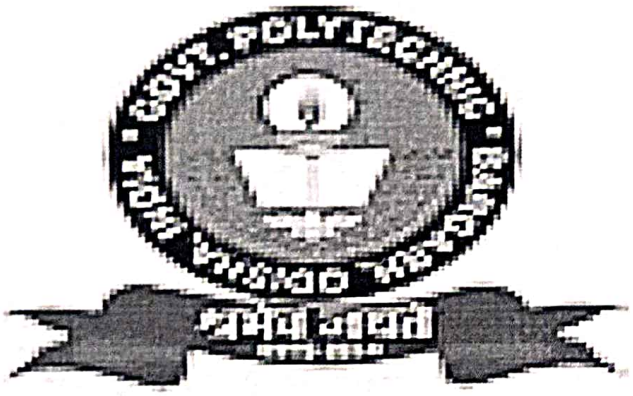
LESSON PLAN

# SOFTWARE ENGINEERING



5TH SEM, CSE

PREPARED BY

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| LECTURE | TOPICS TO BE COVERED | TEACHING MODE |
|---|---|---|
| 1 | **CHAPTER 1**<br>Introduction to Software Engineering | PPT |
| 2 | Program vs. Software product | PPT |
| 3 | Emergence of Software Engineering.<br>Computer Systems Engineering | PPT |
| 4 | Software Life Cycle Models :Classical Water fall model | PPT |
| 5 | Iterative Water fall model<br>Prototyping model | PPT |
| 6 | Evolutionary model<br>Spiral model | PPT |
| 7 | **CHAPTER 2: Software Project Management**<br>Responsibility of Project Manager | PPT |
| 8 | Project Planning | PPT |
| 9 | Metrics for Project size estimation(LOC and FP) | PPT |
| 10 | Project Estimation Techniques | PPT |
| 11 | COCOMO Models, Basic, Intermediate and complete | CHALK & BOARD |
| 12 | Scheduling | PPT |
| 13 | Organization and Team structure | PPT |
| 14 | Staffing | PPT |
| 15 | Risk Management | PPT |
| 16 | Configuration Management | PPT |
| 17 | **CHAPTER 3: Requirement Analysis and specification**<br>Requirements gathering and analysis | PPT |
| 18 | Software Requirements Specification :Contents of SRS | PPT |
| 19 | Characteristics of Good SRS | PPT |
| 20 | Organization of SRS | PPT |
| 21 | Techniques for representing complex logic | PPT |
| 22 | REVISION | PPT |
| 23 | **CHAPTER 4**<br>**Software Design** :What is a Good S/W design | PPT |
| 24 | Cohesion and coupling , Neat arrangement | PPT, CHALK & BOARD |
| 25 | S/W Design approaches<br>Structured analysis | PPT |
| 26 | Data Flow Diagrams<br>Symbols used in DFD | PPT, CHALK & BOARD |
| 27 | Designing DFD<br>Developing DFD model of a system | PPT, CHALK & BOARD |
| 28 | Shortcomings of DFD | PPT, CHALK & BOARD |
| 29 | Structured design | PPT |
| 30 | Principles of transformation of DFD to Structure Chart | PPT |
| 31 | Transform analysis and Transaction Analysis | PPT |
| 32 | Design Review | PPT |
| 33 | REVISION | PPT |
| 34 | **CHAPTER 5**<br>**User Interface Design** | PPT |

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| 35 | Characteristics of Good Interface | PPT |
| 36 | Basic concepts of UID | PPT |
| 37 | Types of User interfaces | PPT |
| 38 | Components based GUI development | PPT |
| 39 | REVISION | PPT |
| 40 | **CHAPTER 6**<br>**Software Coding & Testing**: Coding, Code Review . | PPT |
| 41 | Code walk through. Code inspections and software Documentation | PPT |
| 42 | Testing<br>Unit testing<br>Black Box Testing | PPT |
| 44 | Equivalence class partitioning and boundary value analysis | PPT |
| 45 | White Box Testing | PPT |
| 46 | Different White Box methodologies statement coverage branch coverage, condition coverage, path coverage | PPT |
| 47 | cyclomatic complexity data flow based testing and mutation testing | PPT |
| 48 | Debugging approaches 6.10Debugging guidelines | PPT |
| 49 | Integration Testing<br>Phased and incremental integration testing | PPT |
| 50 | System testing alphas beta and acceptance testing | PPT |
| 51 | Performance Testing, Error seeding | PPT |
| 52 | General issues associated with testing | PPT |
| 53 | **CHAPTER 7**<br>**Software Reliability** | PPT |
| 54 | Different reliability metrics | PPT |
| 55 | Reliability growth modeling | PPT |
| 56 | Software quality | PPT |
| 57 | Software Quality Management System | PPT |
| 58 | REVISION | PPT |
| 59 | PREVIOUS YEAR QUESTION ANSWER DISCUSSION | PPT |
| 60 | PREVIOUS YEAR QUESTION ANSWER DISCUSSION | PPT |

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