

ST. ANN'S COLLEGE OF ENGINEERING & TECHNOLOGY: CHIRALA
DEPARTMENT OF COMPUTERSCIENCE & ENGINEERING
LESSON PLAN

Subject: SOFTWARE ENGINEERING
No. of Lectures per week : 4+1* (Tutorial)

Academic Year: 2017-18
Year & Sem/Section: III-II SEM 'A','B'&'C'

S.No. Unit/Topic No.	Sub Topic Names	No. of Classes required
I	Introduction to Software Engineering: Software, Software Crisis, Software Engineering definition, Evolution of Software Engineering Methodologies, Software Engineering Challenges. Software Processes: Software Process, Process Classification, Phased development life cycle, Software Development Process Models- Process, use, applicability and Advantages/limitations	10
II	Requirements Engineering: Software Requirements, Requirements engineering Process, Requirements elicitation, Requirements Analysis, Structured Analysis, Data Oriented Analysis, Object oriented Analysis, Prototyping Analysis, Requirements Specification, Requirements Validation, requirement Management.	10
III	Software Design: Software Design Process, Characteristics of Good Software Design, Design Principles, Modular Design, Design Methodologies, Structured Design, Structured Design Methodology, Transform Vs Transaction Analysis. Object-Oriented Design: Object oriented Analysis and Design Principles	10
IV	Implementation: Coding Principles, Coding Process, Code verification, Code documentation Software Testing: Testing Fundamentals, Test Planning, Black Box Testing, White Box Testing, Levels of Testing, Usability Testing, Regression testing, Debugging approaches	10
V	Software Project Management: Project Management Essentials, What is Project management, Software Configuration Management. Project Planning and Estimation: Project Planning activities, Software Metrics and measurements, Project Size Estimation, Effort Estimation Techniques.	7
VI	Software Quality: Software Quality Factors, Verification & Validation, Software Quality Assurance, The Capability Maturity Model Software Maintenance: Software maintenance, Maintenance Process Models, Maintenance Cost, Reengineering, Reengineering activities, Software Reuse.	7
Total No. of hours		54

Text Books

1	Software Engineering, concepts and practices, Ugrasen Suman, Cengage learning
2	Software Engineering, 8/e, Sommerville, Pearson.
3	Software Engineering, 7/e , Roger S.Pressman , TMH

References

1	Software Engineering, A Precise approach, Pankaj Jalote, Wiley
2	Software Engineering principles and practice, W S Jawadekar, TMH

FACULTY

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