17CS2204 - SOFTWARE PROJECT MANAGEMENT

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| **Course Category:** | Program Core | **Credits:** | 3 |
| **Course Type:** | Theory | **Lecture – Tutorial – Practical:** | 3-0-0 |
| **Prerequisite:** | Student need to have knowledge in Software engineering | **Sessional Evaluation:****Univ. Exam Evaluation:****Total Marks:** | 4060100 |
| **Objectives** | * Understand basic software requirements.
* About estimation and project schedules
* About design and programming
* Understand management and leadership
* Understand process improvement
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| **Course Outcomes** | Upon successful completion of the course, the students will be able to: |
| CO1 | Learn the basics of Software Project Management and Project Planning |
| CO2 | Learn the concepts of Estimation and Project Schedules |
| CO3 | Overview on Reviews and Software Requirements |
| CO4 | Learn Design and Programming , Software Testing  |
| CO5 | Briefing on change and management and leadership |
| CO6 | Learn the concepts of outsourced projects, Process Improvement |
| **Course Content** | UNIT – I**Introduction**: Tell Everyone the Truth All the Time, Trust Your Team, Review Everything, Test Everything, All Software Engineers Are Created Equal, Doing the Project Right Is Most Efficient.**Software Project Planning**: Understand the Project Needs; Create the Project Plan, Diagnosing Project Planning Problems.UNIT – II**Estimation**: Elements of a Successful Estimate, Wideband Delphi Estimation, Other Estimation Techniques, Diagnosing Estimation Problems**Project Schedules**: Building the Project Schedule, Managing Multiple Projects, Use the Schedule to Manage Commitments, Diagnosing Scheduling Problems.UNIT – III**Reviews:** Inspections, Desk checks, Walkthroughs, Code Reviews, Pair Programming, Use Inspections to Manage Commitments, Diagnosing Review Problems.**Software Requirements:** Requirements Elicitation, Use Cases, Software Requirements Specification, Change Control, Introduce Software Requirements Carefully, Diagnosing Software Requirements Problems.UNIT – IV**Design And Programming**: Review the Design, Version Control with Subversion, Refactoring, Unit Testing, Use Automation, Be Careful with Existing Projects, Diagnosing Design and Programming Problems.**Software Testing**: Test Plans and Test Cases, Test Execution, Defect Tracking and Triage, Test Environment and Performance Testing, Smoke Tests, Test Automation, Postmortem Reports, Using Software Testing Effectively, Diagnosing Software Testing ProblemsUNIT – V**Understanding Change**: Why Change Fails, How to Make Change Succeed.**Management And Leadership**: Take Responsibility, Do Everything Out in the Open, Manage the Organization, Manage Your Team.UNIT –VI**Managing An Outsourced Project**: Prevent Major Sources of Project Failure, Management Issues in Outsourced Projects, Collaborate with the Vendor. **Process Improvement**: Life Without a Software Process, Software Process Improvement, Moving Forward. |
| **Text Books and References:** | **Text Books:**1. Applied Software Project Management by Andrew Stellman and Jennifer Greene, O’Reilly, 2005.

**Reference Books:**1. Quality Software Project Management By Robert T. Futrell, Donald F. Shafer, Linda I. Safer, PHI, 2002
2. Software Project Management in Practice By PankajJalote, Addison Wesley, 2002
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| **E-Resources** | 1. [**https://nptel.ac.in/courses**](https://nptel.ac.in/courses)
2. [**https://freevideolectures.com/university/iitm**](https://freevideolectures.com/university/iitm)
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