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:** | 40  60  100 |
| **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 Problems  UNIT – 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 | |
| **E-Resources** | 1. [**https://nptel.ac.in/courses**](https://nptel.ac.in/courses) 2. [**https://freevideolectures.com/university/iitm**](https://freevideolectures.com/university/iitm) | |