# 20CS22P3 - SOFTWARE ENGINEERING LABORATORY

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| Course Category: | Program Core | Credits: | 1.5 |
| Course Type: | Practical | Lecture-Tutorial-Practical: | 0-0-3 |
| Prerequisite: | A course on Programming for Problem Solving | Sessional Evaluation:  Univ. Exam Evaluation:  Total Marks: | 40  60  100 |
| Objectives: | * To have hands on experience in developing a software project by using various software engineering principles and methods in each of the phases of software development. | | |

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| Course Outcomes | Upon successful completion of the course, the students will be able to: | |
| CO1 | Ability to translate end-user requirements into system and software requirements. |
| CO2 | Ability to generate a high-level design of the system from the software requirements. |
| CO3 | Will have experience and /or awareness of testing problems and will be able to develop a simple testing report. |
| Course Content | **List of Experiments:**   1. **Develop a project titled Course Management System (CMS)**   A course management system (CMS) is a collection of software tools providing an online environment for course interactions. A CMS typically includes a variety of online tools and environments, such as:   * + An area for faculty posting of class materials such as course syllabus and handouts   + An area for student posting of papers and other assignments   + A grade book where faculty can record grades and each student can view his or her grades   + An integrated email tool allowing participants to send announcement email messages to the entire class or to a subset of the entire class   + A chat tool allowing synchronous communication among class participants   + A threaded discussion board allowing asynchronous communication among participants.   Departments can use CMS to create new course proposals, submit changes for existing courses, and track the progress of proposals as they move through the stages of online approval.   1. **Develop a web-based Leave Management Tool - Easy Leave.**   The Easy Leave is an Intranet based application that can be accessed throughout the Organization or a specified group/Dept. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like notifications, cancellation of leave, automatic approval of leave, report generators etc in this Tool.   1. **Develop a safe auction management system called E-Bidding.**   **E-Bidding can be used**   * To generate the quick reports * To make accuracy and efficient calculations * To provide proper information briefly * To provide data security * To provide huge maintenance of records Flexibility of transactions can be completed in time  1. **Electronic Cash Counter**   This project is mainly developed for the Account Division of a Banking sector to provide better interface of the entire banking transactions. This system is aimed to give a better out look to the user interfaces and to implement all the banking transactions like:   * Supply of Account Information * New Account Creations * Deposits * Withdraws * Cheque book issues * Stop payments * Transfer of accounts * Report Generations. | |
| Text Books | 1. Software Engineering - A Practitioner’s Approach – Roger S. Pressman, 7th edition, McGraw - Hill International Edition. 2. Ian Sommerville, Software engineering, Pearson education Asia, 6th edition, 2000. 3. Unified modeling language- Grady booch. | |

**CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - -Not Mapping

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|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | 3 | 3 | 3 | 2 | 3 | 2 | 2 | - | 1 | - | 1 | 3 |
| **CO2** | 3 | 3 | 3 | 3 | 3 | 2 | 2 | - | 1 | - | 1 | 3 |
| **CO3** | 3 | 3 | 3 | 3 | 3 | 2 | 2 | - | 1 | - | 1 | 2 |