**A screenshot of a cell phone

Description generated with very high confidence B. Tech *Program Name***

**COURSE PLAN: LABORATORY COURSE**

|  |  |  |  |
| --- | --- | --- | --- |
| **Department:** | **Humanities and Management** | | |
| **Course Name & code:** | Software Application Design Lab | | **CSF 3141** |
| **Semester & branch:** | **V** |  | |
| **Name of the faculty:** | **Dr. Srikanth Prabhu** | | |
| |  |  |  |  | | --- | --- | --- | --- | | **L** | **T** | **P** | **C** | | **0** | **0** | **3** | **1** |   **No of contact hours/week:** | | | |

**Course Outcomes (COs)**

|  |  |  |  |
| --- | --- | --- | --- |
| **At the end of this course, the student should be able to:** | | **No. of Hours** | **Marks** |
| **CO1** | To understand basic concepts and life cycle models. | 8 | 22 |
| **CO2** | To analyze the requirements of the project. | 4 | 12 |
| **CO3** | To model and design the project | 8 | 22 |
| **CO4** | Understand the analysis and design of the project using UML | 8 | 22 |
| **CO5** | Ability to use standards in coding and testing | 8 | 22 |
| **Total hours/ Marks** | | **36** | **100** |

**Course Articulation Matrix**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | **2** | **2** | **2** |  |  |  |  |  |  |  | **1** | **1** | **1** | **1** | **2** |
| **CO2** | **2** | **2** | **2** |  |  |  |  |  |  |  | **1** | **1** | **1** | **1** | **2** |
| **CO3** | **2** | **2** | **2** |  |  |  |  |  |  |  | **1** | **1** | **1** | **1** | **2** |
| **CO4** | **2** | **2** | **2** |  |  |  |  |  |  |  | **1** | **1** | **1** | **1** | **2** |
| **CO5** | **2** | **2** | **2** |  |  |  |  |  |  |  | **1** | **1** | **1** | **1** | **2** |
| **Average Articulation Level** | **2** | **2** | **2** |  |  |  |  |  |  |  | **1** | **1** | **1** | **1** | **2** |

**ICT Tools used in delivery and assessment**

|  |  |  |
| --- | --- | --- |
| **Sl. No** | **Name of the ICT tool used** | **Details of how it is used** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Course Outcomes (COs)/Course Learning Outcomes (CLOs) to PO, PSO, LO, BL Mapping**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **At the end of this course, the student should be able to:** | | **No. of Contact Hours** | **Marks** | **Program Outcomes (PO’s)** | **Program Specific Outcomes (PSO)** | **Learning Outcomes (LOs) \*\*** | **BL** |
| **CO1** | To understand basic concepts and life cycle models. | 8 | 22 | 1,2,3, | 1,2,3, 11,12 | 1 | 1,2 |
| **CO2** | To analyze the requirements of the project. | 4 | 12 | 1,2,3 | 1,2,3, 11,12 | 2 | 2,3 |
| **CO3** | To model and design the project | 8 | 22 | 1,2,3 | 1,2,3, 11,12 | 2 | 3,4 |
| **CO4** | Understand the analysis and design of the project using UML | 8 | 22 | |  |  |  |  | | --- | --- | --- | --- | | 1,2,3 | 1,2,3, 11,12 | 2 | 3,4 | | 1,2,3 | 2 | 3,4 |
| **CO5** | Ability to use standards in coding and testing | 8 | 22 | 1,2,3 | 1,2,3 | 2 | 3,4 |
|  | **Total** | **36** | **100** |  |  |  |  |

**\*\* Delete this column if not relevant.**

**Delivery and assessment Plan of LOs #**

|  |  |  |
| --- | --- | --- |
| **Learning Outcome (LO) mapped to the course** | | **Delivery and assessment Plan** |
| **LO** | **LO statement** |
| C1 | Apply knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. Some of the knowledge will be at the forefront of the particular subject of study | Program execution during lab hours and weekly evaluation |
| C2 | Analyse complex problems to reach substantiated conclusions using first principles of mathematics, statistics, natural science and engineering principles | Program execution during lab hours and weekly evaluation |

***# Applicable to IET Accredited Programs***

**ASSESSMENT PLAN**

|  |  |  |
| --- | --- | --- |
| **Components** | **Continuous Evaluation: Experiments/Open Ended experiments** | **End semester Examination** |
| **Duration** | 3 Hours per week | 120 Minutes |
| **Weightage** | 60% | 40% |
| **Typology of questions** | Applying; Execution  Evaluating. | Applying; Analysing; Evaluating; Creating |
| **Pattern** | Mid-term exam (20M),  Observation correction (24M) and  Viva (16M) | Answer one full question of 40 marks. Write up – 15 marks  Execution – 25 marks |
| **Schedule** | Weekly | Last week of the semester |
| **Topics** | As per syllabus | Experiments/Open ended. Individual |
| **Mode of Conducting** | Individual | Individual |

**Note: Fine tune the assessment plan as per the guidelines, issued by AD(A), notified from time to time.**

**Lesson Plan**

|  |  |  |
| --- | --- | --- |
| **L No** | **Topics** | **Course Outcome Addressed** |
| Exp 1 | Life Cycle Models Part 1 | CO1 |
| Exp 2 | Life Cycle Models Part2 | CO1 |
| Exp 3 | Cohesion and Coupling Part 1 | CO1 |
| Exp 4 | Cohesion and Coupling Part 2 | CO1 |
| Exp 5 | Function Oriented Design | CO1 |
| Exp 6 | Object Oriented Design | CO2 |
| Exp 7 | Testing Part 1 | CO2 |
| Exp 8 | Testing part 2 | CO2 |
| Exp 9 | GUI | CO3 |
| Exp 10 | GUI | CO2 |
| Exp 11 | GUI | CO2 |
| Exp 12 | Lab Exam |  |
|  |  |  |

**References:**

|  |  |
| --- | --- |
| References | |
| 1 | Rajib Mall, Fundamentals of Software Engineering (4e), PHI Learning, 2014 |
| 2 | Hans Van Vliet, Software Engineering: Principles and Practice (3e), Wiley India, 2012. |
| 3 | Bernd Bruegge, Allen H. Dutoit, Object-Oriented Software Engineering using UML Patterns and Java (2e) , Pearson Publication, 2011 |
| 4 | Ian Sommerville, Software Engineering (9e), Addison-Wesley, 2011. |
| 5 | Nooper Davis, Secure Software Development Life Cycle Processes, Software Engineering Institute, Carnegie Mellon University, 2013. |
| 6 | Julie Cohen, Dan Plakosh, Kristi Keeler, Robustness Testing of Software-Intensive Systems: Explanation and Guide, Carnegie Mellon University, 2005. |

**Submitted by: Dr. Srikanth Prabhu**

**(Signature of the faculty)**

**Date:**

**Approved by:**

**(Signature of HOD)**

**Date:**

**Faculty members teaching the course (if multiple sections exist):**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Faculty** | **Section** | **Faculty** | **Section** | **Signature** |
| **Dr. Srikanth Prabhu** | **A** |  |  |  |
|  |  |  |  |  |
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