**MEPCO SCHLENK ENGINEERING COLLEGE, SIVAKASI (AUTONOMOUS)**

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**LAB MANUAL & RECORD NOTE BOOK**

**III B.TECH IT (VI SEMESTER), 2020–2021**

**I**

|  |  |
| --- | --- |
| **COLLEGE VISION** | **COLLEGE MISSION** |
| Envisioning a World Lead by our Engineers, holding a Beacon of Hope and Confidence for Generations to come | To Produce Competent, Disciplined and Quality Engineers & Administrators through Service par Excellence |
| **DEPARTMENT VISION** | **DEPARTMENT MISSION** |
| To emerge as Realm of Preeminence that empowers the students to reach the zenith, as assertive IT professionals by offering quality technical education and research environment to best serve the nation. | To develop dynamic IT professionals with globally competitive learning experience by providing high class education. |

**II**

**Regulations :** R2015 – Mepco

**Subject :** 15IT652

**Subject Name :** Object Oriented Analysis and Design Lab

**Prepared By Course Coordinator :** Mr. A.S.Karthik Kannan

**Reviewed By Domain Coordinator :** Mrs.R.Venitta Raj

**Head of the Department :** Dr.T.Revathi

**Approved By Programme Coordinator :** Dr.J.Angela Jennifa Sujana

**Effective date :** 23.12.2020

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| **III Program Educational Objectives (PEO)** | | |
| **PEO1** | | Excel in career as an eminent IT-professional. |
| **PEO2** | | Engage in professional activities and commit to team work, accomplishing a common goal. |
| **PEO3** | | Continuously update themselves to adapt to an ever changing global technological environment. |
| **IV Program Outcomes (PO)** | | |
| **PO1** | Apply knowledge of Mathematics, Science, Engineering fundamentals and core IT Skills in various areas. | |
| **PO2** | Study, analyze, identify and devise Engineering Problems. | |
| **PO3** | Design and develop solutions to solve engineering problems as per social needs. | |
| **PO4** | Interpret data, explore and validate conclusion for engineering solutions. | |
| **PO5** | Use suitable IT techniques and tools necessary for engineering practices with an awareness of limitations. | |
| **PO6** | Address societal, legal, cultural, health and safety issues applicable to IT practices. | |
| **PO7** | Comprehend the impact of IT solutions for continuous development of society and environment. | |
| **PO8** | Exhibit professional and ethical responsibilities needed for IT practices. | |
| **PO9** | Contribute productively as a leader or as a member of a team. | |
| **PO10** | Communicate effectively with their excellent listening, comprehending, speaking, writing and presenting skills. | |
| **PO11** | Administer IT projects in various domains using software management principles. | |
| **PO12** | Engage in lifelong self learning in IT technologies. | |
| **Program Specific Outcomes (PSO)** | | |
| **PSO1** | | Demonstrate good programming skills. |
| **PSO2** | | Excel in net-centric programming development. |

**V PEO vs PO Correlation Matrix**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Programme**  **Educational**  **Objectives** | **PO/PSO** | | | | | | | | | | | | | |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| **I - Excel in career as an eminent IT-professional.** | **✓** | **✓** | **✓** | **✓** | **✓** |  | **✓** | **✓** |  | **✓** | **✓** | ✓ | ✓ | ✓ |
| **II - Engage in professional activities and commit to team work, accomplishing a common goal.** | ✓ | ✓ | **✓** | **✓** |  | **✓** |  | **✓** | **✓** | **✓** | **✓** |  |  | ✓ |
| **III - Continuously update themselves to adapt to an ever changing global technological environment.** | ✓ |  | **✓** |  | **✓** | **✓** | **✓** |  |  |  |  | **✓** | **✓** | ✓ |

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| --- | --- |
| **VI Course Outcome** | |
| **CO1** | Construct various UML models for projects |
| **CO2** | Implement forward and reverse engineering |
| **CO3** | Perform testing for simple applications |

**VII Course Outcome – Program Outcome/Program Specific Outcome Matrix**

| **Comp.** | **PO**  **1** | **PO**  **2** | **PO**  **3** | **PO**  **4** | **PO**  **5** | PO  6 | **PO**  **7** | PO  8 | **PO**  **9** | PO10 | PO11 | P012 | **PSO**  **1** | PSO2 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO1** | 1 |  | 2 |  | 2 |  |  |  | 2 |  |  |  |  |  |
| **CO2** |  |  | 2 |  | 2 |  |  |  | 2 |  |  |  | 2 |  |
| **CO3** |  | 1 | 2 | 1 | 3 |  | 1 |  | 2 |  |  |  | 2 |  |

**VIII Syllabus (As prescribed by Mepco Autonomous):**

## 15IT652 Object Oriented Analysis and Design Lab LTPC

## 0 0 4 2

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| **List of Exercises** |
| Practice the following for a given project   1. Identify a problem and prepare statement of work. 2. Develop an IEEE standard SRS document. Also develop project plan (Gantt chart). 3. Identify Use Cases and develop functional model (Functional Requirement Specification). 4. Identify the business activities and develop an UML Activity diagram. 5. Identity the conceptual classes and develop a domain model and UML Class diagram. 6. Using the identified scenarios find the interaction between objects and represent them using UML Interaction diagrams. 7. Draw the State Chart diagram. 8. Identify the User Interface, Domain objects, and Technical services(Code generation) 9. Draw Component and Deployment diagrams. 10. Perform testing for software projects |
| **TOTAL: 45 Periods** |

| **Sl.No.** | **Name of the Exercise** | **No. of Periods** |
| --- | --- | --- |
| 1. | Allocation of Projects and formulate a problem statement | 3 |
| Develop an IEEE standard SRS document | 3 |
| 2. | Develop Project Plan (Using Gantt chart). | 3 |
| 3. | Draw the Use Case diagram and represent the use case templates | 3 |
| 4. | Draw UML Activity diagram | 3 |
| 5. | Develop a domain model and draw UML Class diagram | 3 |
| 6. | Draw UML Sequence diagrams | 3 |
| 7. | Draw State chart diagram | 3 |
| 8. | Implement Forward Engineering (Code Generation) | 3 |
| Implement Reverse Engineering | 3 |
| 9. | Draw Component and Deployment diagrams | 3 |
| 10. | Testing | 6 |
|  | **Evaluatory I and II** | 6 |
| **TOTAL** | | 45 |

**X. Assessment of Internal Marks (Max: 100 marks)**

* Observation & Record : 50 Marks
* Model Exam : 40 Marks
* Attendance : 10 Marks