** E.G.S Pillay Engineering College – Nagapattinam**

**Department of MCA**

 **Course plan - MC9252 /Software Project Management L T P C**

 **3 0 0 3**

 **Subject Code/Name** : MC9252/Software Project Management

 **Class** : III MCA **Batch**  : 2011-2014

 **Prescribed Hours** : 45 **Required Hours** : 46

 **Staff Name** : Ms. J. Vanitha **Semester** : V

**AIM:**

The aim of the course is to provide the students the fundamental learning of software project management, planning, monitoring and control of the project and also provide organizational behaviors.

**INSTRUCTIONAL OBJECTIVES & OUTCOMES**:

**Instructional Objectives**

1. To train the students in the fundamentals of software project Management and various steps.
2. To impart the steps involved in the evaluating of a project.
3. To familiarize the concepts of monitoring and control software project.
4. To enable the students to acquire the concepts of organizational behaviors.

**Instructional Outcomes**

**At the end of the course, the student will able to**

1. explain the activities involved in software project management and stepwise project planning.
2. carryout the cost benefit analysis for a project .
3. explain activity plan for estimating the duration of a project.
4. explain steps involved the progress of the project using continual monitoring report which includes weekly time sheet,activity assessment sheet,etc.,
5. explain the concepts of organizational behaviors.

**PREREQUISITE**:

* + 1. **MC9233** Software Engineering - III Semester

**INSTRUCTIONAL MAPPING WITH POs AND PEOs**

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| **CA5303 /Software Project Management** |
| Instructional designed by | Anna University, Thiruchirappai (2009 Regulations) |
| PO mapping with Instructional outcome  | a | b | c | d | e | f | g | h | i | j | k | l |
|  iv | i |  |  | v |  |  |  |  | ii,iii |  |  |
| PEO mapping with Instructional | Preparation | Core competence | Breadth | Professionalism | Learning Environment |
| X | X |  |  |  |

**DETAILED LESSON PLAN**:

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| **UNIT I FUNDAMENTALS** Project Definition – Contract Management – Activities Covered by Software Project Management – Overview of Project Planning – Stepwise Project Planning. |
| **Session No.** | **Topics to be covered** | **Text book** | **Chapter No. and** **Page No** | **Instruction delivery** | **Testing method** | **Instructional Objective** | **Instructional****Outcome** |
| **Method** | **Level** |
| 1,2 | Project Definition, Contract Management | Bob Hughes and MikeCotterell, “Software Project Management”, Third Edition, TATAMcGraw Hill Edition, 2004 | Chapter 1Pg 1-4 | Board and chalk | Knowledge | Unit test | 1. To understand the fundamentals of software project management and various steps involved in project planning. | i)explain the activities involved in software project management and stepwise project planning. |
| 3,4 | Activities Covered by Software ProjectManagement | Chapter 1Pg 4-7 | PPT | Understanding | Unit test and Assignment |
| 5,6 | Overview of Project Planning | Chapter 2Pg 20-39 | PPT | Understanding | Unit test |
| 7,8,9 | Stepwise Project Planning | PPT | Understanding | Unit test and Assignment |
| **UNIT II PROJECT EVALUATION** Strategic Assessment – Technical Assessment – Cost Benefit Analysis – Cash Flow Forecasting – Cost Benefit Evaluation Techniques – Risk Evaluation. |
| **Session No.** | **Topics to be covered** | **Text book** | **Chapter No. and** **Page No** | **Instruction delivary** | **Testing method** | **Instructional Objective** | **Instructional** **Outcome** |
| **Method** | **Level** |  |
| 10 | Strategic Assessment | Bob Hughes and MikeCotterell, “Software Project Management”, Third Edition, TATAMcGraw Hill Edition, 2004 | Chapter 3Pg 46 | Board and chalk | knowledge | Unit test | 2.To understand how to evaluate a project . | ii)do the cost benefit analysis for a project  |
| 11 | Technical Assessment | Chapter 3Pg 53 | Board and chalk | understanding | Unit test |
| 12,13 | Cost Benefit Analysis | Chapter 3Pg 53-54 | PPT | Application | Unit test and Assignment |
| 14,15 | Cash Flow Forecasting | Chapter 3Pg 54-55 | PPT | Application | Unit test and Assignment |
| 16,17 | Cost Benefit Evaluation Techniques | Chapter 3Pg 55-61 | PPT | Application | Unit test |
| 18 | Risk Evaluation | Chapter 3Pg 61-66 | Board and chalk | Application  | Unit test and Assignment |
| **UNIT III ACTIVITY PLANNING** Objectives – Project Schedule – Sequencing and Scheduling Activities – Network Planning Models – Forward Pass – Backward Pass – Activity Float – Shortening Project Duration – Activity on Arrow Networks – Risk Management – Nature of Risk – Types of Risk – Managing Risk – Hazard Identification – Hazard Analysis – Risk Planning and Control. |
| **Session No.** | **Topics to be covered** | **Text book** | **Chapter No. and** **Page No** | **Instruction delivery** | **Testing method** | **Instructional Objective** | **Programme outcome** |
| **Method** | **Level** |
| 19 | Objectives, Project Schedule | Bob Hughes and MikeCotterell, “Software Project Management”, Third Edition, TATA McGraw Hill Edition, 2004 | Chapter 6 Pg 118 -125 | Board and chalk | Knowledge | Unit test | 2.To understand how to evaluate a project | iii. explain activity plan for estimate the duration of a project. |
| 20 | Sequencing and Scheduling Activities | Chapter 6 Pg 125 -126 | PPT | Understanding | Unit test and Assignment |
| Network Planning Models | Chapter 6Pg 126-131 | PPT | Understanding | Unit test |
| 21 | Forward Pass | Chapter 6Pg 132-133 | Board & chalk | Application | Unit test and Assignment |
| Backward Pass | Chapter 6Pg 133-134 | Board & chalk | Application | Unit test and Assignment |
| 22 | Activity Float | Chapter 6Pg 135-136  | Board & chalk | Understanding | Unit test |
| Shortening Project Duration | Chapter 6 Pg 136  | Board & chalk | Understanding | Unit test |
| Activity on Arrow Networks | Chapter 6 Pg 137-144  | PPT | Understanding | Unit test |
| 23 | Risk Management  | Chapter 7Pg 147 | PPT | Knowledge  |
| 24 | Nature of Risk, Types of Risk | Chapter 7Pg 149-151 | PPT | Knowledge | Unit test |
| Managing Risk |  | PPT | Understanding | Unit test |
| 25 | Hazard Identification | Chapter 7Pg 151-155 | PPT | Knowledge | Unit test |
| 26 | Hazard Analysis | Chapter 7Pg 155-158 | PPT | Understanding | Unit test |
| 27 | Risk Planning and Control | Chapter 7Pg 158-160 | PPT | Understanding | Unit test  |
| **UNIT IV MONITORING AND CONTROL** Creating Framework – Collecting the Data – Visualizing Progress – Cost Monitoring – Earned Value – Prioritizing Monitoring – Getting Project Back To Target – Change Control – Managing Contracts – Types Of Contract – Stages In Contract Placement – Typical Terms of a Contract – Contract Management – Acceptance. |
| **Session No.** | **Topics to be covered** | **Text book** | **Chapter No. and** **Page No** | **Instruction delivery** | **Testing method** | **Instructional Objective** | **Programme outcome** |
| **method** | **level** |  |
| 28 | Creating the framework | Bob Hughes and MikeCotterell, “Software Project Management”, Third Edition, TATA McGraw Hill Edition, 2004 | Chapter 9Pg 190-193 | PPT | Understanding | Unit test | 4.To learn how to monitor and control software projects | iv) explain the progress of the project |
| Collecting the Data | Chapter 9Pg 193-196 | PPT | Understanding | Unit test |
| 29 | Visualizing Progress | Chapter 9Pg 196-199 | PPT | Understanding | Unit test |
| Cost Monitoring | Chapter 9Pg 200 | PPT | Understanding | Unit test |
| 30 | Earned Value | Chapter 9Pg 201-205 | PPT | Understanding | Unit test |
| 31 | Prioritizing Monitoring | Chapter 9Pg 205-206 | PPT | Understanding | Unit test |
| Getting Project Back to Target | Chapter 9Pg 206-207 | PPT | Understanding | Unit test |
| 32 | Change Control | Chapter 9Pg 207-209 | PPT | Understanding | Unit test and Assignment |
| Managing Contracts | Chapter 10Pg 211-216 | PPT | Understanding | Unit test |
| 33 | Types of Contracts | Chapter 10Pg 216-221 | PPT | Understanding | Unit test |
| 34 | Stages in Contract Placement  | Chapter 10Pg 221-226 | PPT | Understanding | Unit test |
| 35 | Typical Terms of a contract | Chapter 10Pg 226-228 | PPT | Knowledge | Unit test |
| 36 | Contract Management | Chapter 10Pg 229 | PPT | Understanding | Unit test and Assignment |
| Acceptance | Chapter 10Pg 230 | PPT | Understanding | Unit test |
| **UNIT V MANAGING PEOPLE AND ORGANIZING TEAMS** Understanding Behavior – Organizational Behavior: A Background –Selecting Right Person for Job – Instruction in Best Methods – Motivation – The Oldman–Hackman Job Characteristics Model – Working in Groups – Becoming a Team – Decision Making – Leadership – Organizational Structures – Stress – Health and Safety – Case Studies. |
| **Session No.** | **Topics to be covered** | **Text book** | **Chapter No. and** **Page No** | **Instruction delivery** | **Testing method** |  **Instructional Objective** | **Programme outcome** |
| **Method** | **Level** |
| 37 | Understanding Behavior | Bob Hughes and MikeCotterell, “Software Project Management”, Third Edition, TATA McGraw Hill Edition, 2004MikeCotterell, “Software Project Management”, Third Edition, TATAMcGraw Hill Edition, 2004 | Chapter 11Pg 234 | Board & chalk | Knowledge | Unit test | 4.explain the progress of the project. | v)explain the concepts of organizational behaviours. |
| Organizational Behavior: A Background | Chapter 11Pg 234-235 | Board & chalk | Knowledge | Unit test |
| 38 | Selecting Right Person for Job | Chapter 11Pg 235-237 | Board & chalk | Understanding | Unit test |
| Instruction in Best Methods | Chapter 11Pg 237 |
| 39 | Motivation | Chapter 11Pg 238-240 | Board & chalk | Understanding | Unit test and Assignment |
| 40 | The Oldman–Hackman Job Characteristics Model | Chapter 11Pg 240-241 | Board & chalk | Understanding | Unit test and Assignment |
| 41 | Working in Groups | Chapter 11Pg 241 | Board & chalk | Knowledge | Unit test andGroup Discussion  |
| Becoming a Team | Chapter 11Pg 241-243 | Board & chalk | Knowledge |
| 42 | Decision Making | Chapter 11Pg 243-245 | Board & chalk | Understanding | Unit test and and Assignment |
| Leadership | Chapter 11Pg 245-247 | Board & chalk | Understanding | Unit test andGroup Discussion |
| 43 | Organizational Structures | Chapter 11Pg 247-249 | Board & chalk | Understanding | Unit test and Assignment |
| 44 | Stress | Chapter 11Pg 255 | Board & chalk | Understanding | Unit test |
| 45 | Health and Safety | Chapter 11Pg 255-256 | Board & chalk | Knowledge | Quiz |
| 46 | Case Studies | - | PPT | Analysis | Group Discussion and Assignment |

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| **TEXT BOOKS** |
| **S.No** | **Title of the book** | **Author** | **Publisher** |
| 1. | Software Project Management | Bob Hughes and MikeCotterell | Third Edition, TATA McGraw Hill Edition, 2004 |
| 2. | Software Project Management In Practice | P.Jalote | Pearson Education, 2000 |
| **REFERENCE BOOKS** |
| 3. | Managing Global Projects | Ramesh Gopalaswamy | Tata McGraw Hill, 2001. |
| 4. | Software Project Theory | Royce | Pearson Education, 1999 |
| **WEB REFERENCES** |
| <http://en.wikipedia.org/wiki/Software_project_management><https://www.comp.glam.ac.uk/staff/dwfarthi/projman.htm> |

**GAP ANALYSIS**

The syllabus of the instructional succeeds in imparting the basic knowledge of Software Project Management. However it does not cover the usage of Software Project Management tools currently used in industry. Introduction to the widely used Microsoft Software Project Management tool “Microsoft Project 2010” will be given as content beyond syllabus to fill the gap.

**Content beyond syllabus:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Topic** | **Hours** | **Mode of delivery** |
| **1.** | Introduction to Microsoft Project 2010 tool | **5** | PPT & Laboratory Training  |

**Content beyond syllabus mapping with PEO and PO**

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| **CA5303 /Software Project Management** |
| PO mapping with Content beyond syllabus | a | b | c | d | e | f | g | h | i | j | k | l |
|  |  |  |  |  |  |  | X |  |  |  |  |
| PEO mapping with Content beyond syllabus | Preparation | Core competence | Breadth | Professionalism | Learning Environment |
| X | X |  |  |  |

**Internal marks Assessment Method**

**Test : 10**

**Attendance : 5**

**Assignment : 5**

**Total : 20**

**ASSIGNMENTS**

|  |  |
| --- | --- |
| **A. No** | **Assignment Titles** |
| I(I UNIT & II UNIT) | 1. Explain the activities covered by Software project Management.2. Explain stepwise Project Planning.3. How Cost Benefit analysis is done in a Software Project?4. Write Briefly about Cash flow forecasting.5. Elaborate Risk Evaluation. |
| II(III & IV UNIT) | 1. Discuss in detail Sequencing and Scheduling.
2. Explain forward Pass and Backward Pass.
3. Write in detail about Change Control.
4. Explain the types of contracts and the stages in the contract placement.

5. Elaborate Cost monitoring. |
| III(V UNIT) | 1. Explain the Oldman-Hackman job characteristics Model.
2. In Detail explain Decision Making process.
3. Discuss Organizational Structures.
4. Give the importance of Motivation.
5. Discuss the content of project plan for small projects.
 |
| IV | Using Microsoft Project 2010 software Prepare the following for a Mini-Project1. Define the work calendar 2. Create a pool of resources
2. Create activities (tasks) 4. Assign resources to tasks
3. Construct a Project Plan 6. Produce a Gantt Chart and Network Diagram
4. Estimate the total project duration
 |

**TEST PORTION**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Name of the Test** | **Test Units** | **Examination Date** |
| 1. | Cycle I | Unit 1  |  |
| 2. | Cycle II | Unit 2 & 3 |  |
| 3. | Model | Full Portion |  |

**Instructional in-charge signature HOD Signature**

**ASSIGNMENTS**

|  |  |  |
| --- | --- | --- |
| **A. No** | **Assignment Titles** | **Assessment level** |
| I(I UNIT & II UNIT) | 1. Explain the activities covered by Software project  Management.2. Explain stepwise Project Planning.3. How Cost Benefit analysis is done in a Software Project?4. Write Briefly about Cash flow forecasting.5. Elaborate Risk Evaluation. | 1. Understanding 2. Understanding3. Application4. Application5. Application |
| II(III & IV UNIT) | 1. Discuss in detail Sequencing and Scheduling.
2. Explain forward Pass and Backward Pass.
3. Write in detail about Change Control.
4. Explain the types of contracts and the stages in the contract placement.

5. Elaborate Cost monitoring | 1. Understanding2. Application3. Understanding4. Understanding5. Understanding |
| III(V UNIT) | 1. Explain the Oldman-Hackman job characteristics Model.
2. In Detail explain Decision Making.
3. Discuss Organizational Structures.
4. Give the importance of Motivation.
5. Case Studies.
 | 1. Understanding2. Understanding3. Understanding4. Understanding 5. Analysis  |
| IV | Using Microsoft Project 2010 software Prepare the following for a Mini-Project1. Define the work calendar
2. Create a pool of resources
3. Create activities (tasks)
4. Assign resources to tasks
5. Construct a Project Plan
6. Produce a Gantt Chart and Network Diagram
7. Estimate the total project duration
 | Application  |