EASWARI ENGINEERING COLLEGE, CHENNAI-600 089
DEPARTMENT OF INFORMATION TECHNOLOGY
LESSON PLAN

SUBJECT CODE : SE 7201

SUBJECT TITLE : SOFTWARE PROJECT PLANNING AND MANAGEMENT

HOURS DISTRIBUTION **:** (L T P C 3 0 0 3)

COURSE/ BRANCH : M.E. (SOFTWARE ENGINEERING)

SEMESTER : II

ACADEMIC YEAR : 2014 - 2015

FACULTY NAME : V.BALAJI

OBJECTIVE OF COURSE :

- To understand the various software processes.
- To learn format process models.
- To gain knowledge of the overall project activities
- To analyses the various issues in each phase of project management and people management

OUTCOME OF COURSE **:**

Students who have completed this course would have learned

a) Get the basic knowledge about various processes.
b) Emphasize the use of format process models.
c) Knowledge gained in usage and application of umbrella activities for project management
d) Execute the project development in a systematic manner using tools and techniques
e) Issues are analyzed in various phases of project management and people management

EASWARI ENGINEERING COLLEGE
Department of Information Technology
LESSON PLAN

Subject code : SE7201 Degree/Branch : M.E/ SE
Subject Name : Software Project Planning and Management Year/Sem : I / II
Faculty Name : Mr. V.Balaji Total No. of hrs given in syllabus: 45
Lecture : 3
Tutorial : 0
Practical : 0
Grand Total : 45Hrs

Sl.No	Topic	No. of Periods	Reference Books	Page No
	UNIT I -Basic Concepts			
	Objective : This unit gives an overview of software project management and the project planning. It also covers the Step Wise framework in project planning.			
1	Product, Process and Project – Definition, Software Process Maturity framework	1	R5	1-15
2	Principles of Software Process Change	1	R5	17-33
3	Software Process Assessment	1	R5	35-52
4	The initial process	1	R5	55-66
5	The Repeatable Process	1	R5	67-153
6	The Defined Process	1	R5	155-298
7	The Managed Process	1	R5	299-359
8	TheOptimizing Process	1	R5	361-443
9	Product Life Cycle-Project Life Cycle Models.	1	R1	9-36
	UNIT II			
	Objective : This Unit refers to a process improvement approach and it provides way to develop and refine an organization's processes			
10	Definition of process and characteristics of process	1	R1	36-39
11	Effectiveness of process and importance of process	1	R1	39-42
12	The ISO 9001	1	R1	42-45
14	CMM model	1	R1	45-50

15	People CMM.-Growing Emphasis on people centric models	1	R1	348-349
16	People CMM- Levels	1	R1	350-353
17	Advantages and Challenges of P-CMM	1	R1	353
18	other people focused	1	Hand outs	
	UNIT III			
	Objective : To produce an plan for a project and to estimate the overall duration of the project by analyzing the risks involved in it. .			
19	Software Project Management	1	Hand outs	
20	Formal Technical Reviews-Review meeting and Reporting	1	R3	426-427
21	Formal Technical Reviews-Guidelines and Sample reviews	1	R3	427-430
22	Software Quality Assurance	1	R1	106-123
23	Software Configuration Management	1	R1	83-104
24	Re-usability Management-	1	Hand outs	
25	Risk analysis and Management	1	R1	126-140
26	Measurement and Metrics	1	R1	57-80
27	Document Preparation and Production	1	R3	*770*
	UNIT IV			
	Objective: To produce a plan for feasibility study estimation and resource allocation and introduce the concept of project database.			
28	Project Initiation -Activities	1	R1	150-159
29	Project Initiation -output. Quality Records, Completion Criteria	1	R1	159-161
30	Project Planning	1	R1	163-181
32	feasibility study estimation-Phases	1	R1	226-231
33	Methodology	1	R1	231-233
34	Resource Allocation	1	R3	695-697
35	execution and tracking	1	R1	182-191
33	Root cause analysis, Project Wind-up	1	Hand outs	
36	Concept of process/project database.	1	R1	191-192
	UNIT V			
	Objective : This unit covers Software Development Life Cycle is essentially a series of steps, or phases, that provide a model for the development and lifecycle management of an application or piece of softwar**e.**			
37	Phases Of Software Engineering	1	R1	241-242
38	Engineering activities and management issues in Design Phase	1	R1	242-261

39	Engineering activities and management issues in Development phase	1	R1	261-265
40	Engineering activities and management issues in Testing phase	1	R1	268-297
41	Engineering activities and management issues in Maintainence phase	1	R1	299-315
42	Difficulties in people management - Role of Project manager	1	Hand outs	
43	Special considerations in project management for India	1	Hand outs	
45	geographic distribution issues.	1	R1	319-330
Total Periods		**45**		
Content beyond the syllabus				
1	Project Management Tools		Hand outs	
2	Project Management Standards		Hand outs	

References:

1. Ramesh, " Gopalaswamy: Managing Global Projects ", Tata McGraw Hill, 2001
2. Humphrey, Watts: "Managing the software process ", Addison Wesley, 1986.
3. Pressman, Roger: "Software Engineering ", A Practitioner's approach, McGraw Hill, 1997.
4. DeMarco and Lister: "Peopleware ".
5. Wheelwright and Clark: "Revolutionising product development ", The Free Press, 1993.

6.Watts Humphrey, "Managing the Software Process ", Pearson Education, New Delhi, 2000
7. Pankaj Jalote, "Software Project Management in practice", Pearson Education, New Delhi,

Prepared By

Approved By

Mr. V.Balaji

HOD/IT

Program Educational Objective

1. Apply software engineering theory, principles, tools and processes, as well as the theory and principles of computer science and mathematics, to the development and maintenance of complex, scalable software systems.
2. Design and experiment with software prototypes
3. Select and use software metrics
4. Communicate effectively through oral and written reports, and software documentation
5. Elicit, analyze and specify software requirements through a productive working relationship with project stakeholders
6. Demonstrate professionalism including continued learning and professional activities.
7. Contribute to society by behaving ethically and responsibly.
8. Successfully assume a variety of roles in teams of diverse membership.
9. Apply a systematic, disciplined, quantifiable approach to the cost-effective development, operation and maintenance of software systems to the satisfaction of their beneficiaries.
10. Build solutions using different technologies, architectures and life-cycle approaches in the context of different organizational structures.
11. Insist the development, adoption and sustained use of standards of excellence for software engineering practices..

Program Outcomes

A. Upon completion of the course, students would have obtained:
B. An ability to apply knowledge of mathematics, science, and engineering.
C. An ability to design and conduct experiments, as well as to analyze and interpret data.
D. An ability to design a system, component, or process to met desired needs within realistic constraints such as economic, environmental, social, political, ethical, safety, and sustainability.
E. Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.
F. An ability to identify, formulate, and solve engineering problems.
G. An understanding of professional and ethical responsibility.
H. An ability to communicate effectively.
I. Demonstrate a knowledge and understanding of management and business practices, such as risk and change management, and understand their limitations.
J. A recognition of the need for, and an ability to engage in life-long learning.
K. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
L. An understanding of real-time, safety-critical, embedded computer systems.

MAPPING OF COURSE OUTCOMES WITH PEO & THE PROGRAMME OUTCOME-
(SE 7201 SOFTWARE PROJECT PLANNING AND MANAGEMENT)

UNITS	Course Outcomes	OB1	OB2	OB3	OB4	OB5	OB6	OB7	OB8	OB9	OB10	OB11	OCa	OCb	OCc	OCd	OCe	OCf	OCg	OCh	OCi	OCj	OCk	OCl
Product, Process and Project – Definition, Software Process Maturity ,Software maturity Framework, Principles of Software Process Change, Software Process Assessment, The Initial Process, The Repeatable Process, The Defined Process, The Managed Process, The Optimizing Process, Product Life Cycle-Project Life Cycle Models.	*At the end, the student can able to get the basic knowledge about various processes.*	S	S	M	S	M	W	S	S	W	S	M	S	S	S	S	S	S	W	M	M	S	S	W
Definition and format model for a process, The ISO 9001 and CMM models and their relevance to project Management-other emerging models like People CMM.	*At the end, the student can able to Emphasize the use of format process models..*	S	S	S	S	M	W	S	S	W	S	M	S	S	S	M	S	S	W	M	M	S	S	W

Project Management -Formal Technical Reviews- Software Quality Assurance- Software Configuration Management-Re-usability Management-Risk analysis and Management -Measurement and Metrics-Document Preparation and Production	*At the end, the student can able to Knowledge gained in usage and application of umbrella activities for project management.*	S	S	S	M	S	W	S	S	W	S	M	S	S	S	S	S	S	W	M	M	S	S	M
Project Initiation - Project Planning- feasibility study estimation- resource allocation- execution and tracking,-root cause analysis- Project Wind-up-Concept of process/project database.	*At the end, the student can able to Execute the project development in a systematic manner using tools and techniques*	S	S	S	S	M	S	S	S	W	S	M	S	S	S	S	M	S	W	M	W	S	S	W
Phases (Requirements, Design, Development, Testing, maintenance, deployment) - engineering activities and management issues in each phase-Difficulties in people management - Role of Project manager ,Special considerations in project management for India and geographic distribution issues	*At the end, the student can able to the Issues are analyzed in various phases of project management and people management*	S	S	S	S	M	S	S	S	W	S	M	S	S	S	M	S	S	W	S	M	S	S	W

S->STRONG *M->MEDIUM* *W->WEAK*