

MOHAMMED SATHAK A J COLLEGE OF ENGINEERING

Siruseri IT park, OMR, Chennai - 603103

LESSON PLAN

Department of INFORMATION TECHNOLOGY

Name of the Subject	Software Project Management	Name of the handling Faculty
Subject Code	IT8075	Year / Sem
Acad Year	2021-2022	Batch

Course Objective

- To understand the software project planning and evaluation techniques.
- To plan and manage projects at each stage of the software development life cycle (SDLC).
- To learn about the activity planning and risk management principles.
- To manage software projects and control software deliverables.
- To develop skills to manage the various phases involved in project management & people also deliver successful software projects.

Course Outcome

- CO1. Understand project management principles while developing software.
- CO2. Describe the basic project management concepts, framework and the process models.
- CO3. Understand about software process models and software effort estimation.
- CO4. Determine the risks involved in various project activities.
- CO5. Identify the check points, project reporting structure, project progress and tracking mechanisms.

Sl. No.	Topic(s)	T / R*		Periods Required	Mode of T (BB / PPT / MOOC)
		Book			
UNIT I PROJECT EVALUATION AND PROJECT PLANNING					
1	Importance of Software project management	T		1	BB
2	Activities, methodologies of software projects	T		1	BB
3	Categorization of software projects	T		1	BB
4	Setting objectives of projects	T		1	BB
5	Management principles and controls	T		1	BB
6	Project portfolio management	T		1	BB
7	Cost benefit evaluation technology	T		1	BB
8	Risk evaluation of strategic program management	T		1	BB
9	Stepwise project planning	T		1	BB

Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any

1. Define Software project management.

2. What are the three activity of Software project management?

3. List different stages of Project management.

4. What are the risks involved in project management?

UNIT II PROJECT LIFE CYCLE AND EFFORT ESTIMATION

10	Software process and Process Models	T		1	BB
11	Choice of process models – Rapid Application Development	T		1	BB
12	Agile methods and Dynamic System Development Method	T		1	BB
13	Extreme programming and managing interactive processes	T		1	BB
14	Basics of software estimation	T		1	BB

15	Effort and Cost estimation techniques	T,R2	1	BB
16	COSMIC full function points	T,R2	1	BB
17	COCOCMO II	T,R1	1	BB
18	A parametric productivity model	T,R1	1	BB

Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any

1.Explain in detail aboutsoftware process models.

2.Explain Agile methodologies.

3.What is Extreme programming? What are the effort and cost estimation techniques?

4.Explain COCOMO II model.

Evaluation method

UNIT III ACTIVITY PLANNING AND RISK MANAGEMENT

19	Objectives of Activity planning	T	1	BB
20	Project schedules and Activities	T	1	BB
21	Sequencing and scheduling , Network Planning models	T	1	BB
22	Formulating Netwok model	T	1	BB
23	Forward Pass & Backward Pass techniques	T	1	BB
24	Critical path method (CRM)	T	1	BB,PPT
25	Risk identification, assessment and Risk planning	R1,W1	1	BB,PPT
26	Risk management, PERT technique, Monte Carlo simulation	R2,W2	1	PPT
27	Resource allocation & Creation of critical paths,cost schedules	T,W1	1	BB

Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any

1. List the objectives of planning.

2.What is forward pass?.

3.Define hazard. How are hazards identified and analyzed?

4. Describe with an example how the effect of risk on project schedule is evaluated using PERT.

UNIT IV PROJECT MANAGEMENT AND CONTROL

28	Framework for management and control	T	1	BB
29	Collection of data and visualizing progress	T	1	BB
30	Cost Monitoring	T	1	BB
31	Earned Value Analysis	T	1	BB
32	Prioritizing Monitoring and Project tracking	T	1	BB
33	Change control	T	1	BB
34	Software configuration management	T	1	BB,PPT
35	Managing Contracts	R1,W2	1	BB,PPT
36	Contract Management	T,W2	1	PPT

Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any

1.Define a checkpoint.

2.What are the different types of visualizing progress explain in detail?

3. Explain the earned value analysis methods.

Evaluation method

UNIT V STAFFING IN SOFTWARE PROJECTS

37	Managing people and Organizational behavior	T	1	BB
38	Best methods of staff selection, Motivation	T	1	BB
39	The Oldham-Hackman job characteristics model	T	1	BB
40	Stress ,Health and Safety	T	1	BB
41	Ethical and Professional concerns, Working in teams	T	1	PPT
42	Decision making and Organizational structures	T	1	PPT
43	Dispersed and virtual teams	T,W2	1	BB

44	Communication genres	R1,W2	1	BB
45	Communication plans and Leadership	R2,W2	1	BB

Evaluation method

1	
2	

1	1. Bob Hughes, Mike Cotterell and Rajib Mmall: Software Project Management – Fifth Edition, Tata McG
2	

1	1. Robert K. Wysocki – Effective Software Project Management II – Wiley Publication, 2011.
2	2. Walker Royce: - Software Project Management II – Addison – Wesley, 1998.
3	3. Gopalaswamy ramesh, - Managing Global Software Projects II – McGraw Hill Education (India), Fourth

1	W1: http://nptel.ac.in/
2	W2: https://www2.cs.siu.edu/~mengxia/Courses%20PPT/435/Chapter_03.pdf
3	W3: http://www.cs.tau.ac.il/~nachumd/models/Nets.pdf

Level 1 (L1) : Remembering	Lower Order Thinking	Fixed Hour Exams	Level 4 (L4) : Anal
Level 2 (L2) : Understanding			Level 5 (L5) : Evalu
Level 3 (L3) : Applying			Level 6 (L6) : Crea

Unit No	Unit Name	L1	L2	L3	L4
Unit 1	PROJECT EVALUATION AND PROJECT PLAN	2	4	3	0
Unit 2	PROJECT LIFECYCLE AND EFFORT ESTIMAT	4	3	2	0
Unit 3	MANAGEMENT	2	4	3	0
Unit 4	PROJECT MANAGEMENT AND CONTROL	2	5	2	0
Unit 5	STAFFING IN SOFTWARE PROJECTS	3	4	2	0
Total		13	20	12	0
Total Percentage		28.88889	44.44444	26.66667	0

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	3	2	1	0	0	0	0	0	0
CO2	3	2	1	0	0	0	0	0	0
CO3	3	2	1	0	0	0	0	0	0
CO4	3	2	1	0	0	0	0	0	0
CO5	3	2	1	0	0	0	0	0	0
Avg	3	2	1	0	0	0	0	0	0

CO1	Understand project management principles while developing software.
CO2	Describe the basic project management concepts,framework and the process models.

CO3	Understand about software proses models and software effort estimation.							
CO4	Determine the risks involved in various project activities.							
CO5	Identify the check points,project reporting structure,project progress and tracking mechanisms.							
	High level			2		Moderate level		
Name & Sign of Subject Expert : Sasikala.L								
Head of the Department : CSE								
Format No :231								

MSAJCE

RING			
Mrs.Sasikala.L			
IV/VII			
2017-2021			
projects that supports organizations goals.			
Teaching / NPTEL C / etc)	Blooms Level (L1-L6)	CO	PO
	L1	CO1	PO1-PO2
	L1	CO1	PO1
	L2	CO1	PO1-PO2
	L2	CO1	PO2
	L2	CO1	PO2
	L3	CO1	PO2
	L3	CO1	PO2
	L3	CO1	PO1-PO3
	L2	CO1	PO1-PO3
agement?			
ect life cycle?			
t is major principle of project planning?			
	L1	CO2	PO1
	L1	CO2	PO1
	L1	CO2	PO2
	L1	CO2	PO2
	L2	CO2	PO2

	L2	CO2	PO2
	L2	CO2	PO2
	L3	CO2	PO1-PO3
	L3	CO2	PO1-PO3
	L1	CO3	PO1
	L1	CO3	PO1
	L2	CO3	PO2
	L2	CO3	PO2
	L2	CO3	PO2
	L3	CO3	PO2
	L2	CO3	PO2
	L3	CO3	PO1-PO3
	L3	CO3	PO1-PO3
	L1	CO4	PO1
	L1	CO4	PO1
	L2	CO4	PO1
	L2	CO4	PO2
	L2	CO4	PO2
	L2	CO4	PO1-PO3
	L2	CO4	PO1-PO3
	L3	CO4	PO1-PO3
	L3	CO4	PO1-PO3
	L1	CO5	PO1
	L1	CO5	PO1
	L1	CO5	PO1
	L2	CO5	PO2
	L2	CO5	PO2
	L2	CO5	PO1-PO3
	L3	CO5	PO1-PO3

	L3	CO5	PO1-PO3
	L2	CO5	PO2

gnment topic

raw Hill, New Delhi,2012.

eenth Reprint 2013.

lysing			Higher Order Thinkin g	Projects / Mini Projects
uating				
ating				
L5	L6	LOT	HOT	Total
0	0	9	0	9
0	0	9	0	9
0	0	9	0	9
0	0	9	0	9
0	0	9	0	9
0	0	45	0	45
0	0	100	0	100

PO10	PO11	PO1 2	PSO1	PSO2
0	0	0	3	2
0	0	0	3	2
0	0	0	3	2
0	0	0	3	2
0	0	0	3	2
0	0	0	3	2

1		Low level			

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