MOHAMMED SATHAK A J COLLEGE OF ENGINEERIN

Siruseri IT park, OMR, Chennai - 603103

LESSON PLAN

Department of COMPUTER SCIENCE & ENGINEERING

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 developement 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 managemant & people also deliver successful software projects that supports

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 prosess 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 / Tuorials/ 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 life cycle?

4.What is major principle of project planning?

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 methodoligies.

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

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Mrs.Sathiyapriya

	IV/VII		
	2017-2021		

organizations goals.

Teaching / NPTEL / 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
	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

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 MANAGEMANT AND CONTROL

28	**Framework for management and control**	T		1	BB
Department of COMPUTER SCIENCE & ENGINEERING	**Collection of data and visualizing progress**	T		1	BB
30	**Cost Monitering**	T	Mrs.Sath	1	BB
31	**Earned Value Analysis**	T		1	BB
32	**Prioritizing Monitering 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

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

1.What is motivation under the Taylor's model? 2.Mention the two factors of Herzberg's theory.

3.Explain the Oldham-hackman job characteristic model.

Evaluation method

Content Beyond the Syllabus Planned

1	
2	

	Text Books
1	**1. Bob Hughes, Mike Cotterell and Rajib Mmall: Software Project Management – Fifth Edition, Tata McGraw Hill, New Delhi,2012.**
2	

	Reference Books
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), Fourteenth Reprint 2013.**

	Website / URL References
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

		Blooms Level		
Level 1 (L1) : Remembering	Lower Order Thinking	Fixed Hour Exams	Level 4 (L4) : Analysing	
Level 2 (L2) : Understanding			Level 5 (L5) : Evaluating	
Level 3 (L3) : Applying			Level 6 (L6) : Creating	

		Mapping syllabus with Bloom's Taxonomy LOT and HOT				
Unit No	**Unit Name**	**L1**	**L2**	**L3**	**L4**	**L5**
Unit 1	PROJECT EVALUATION AND PROJECT PLAN	2	4	3	0	0
Unit 2	PROJECT LIFECYCLE AND EFFORT ESTIMAT	4	3	2	0	0
Unit 3	MANAGEMENT	2	4	3	0	0
Unit 4	PROJECT MANAGEMENT AND CONTROL	2	5	2	0	0
Unit 5	STAFFING IN SOFTWARE PROJECTS	3	4	2	0	0

Total						13	20	12	0	0
Total Percentage						28.88889	44.44444	26.66667	0	0

CO PO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	1	0	0	0	0	0	0	0
CO2	3	2	1	0	0	0	0	0	0	0
CO3	3	2	1	0	0	0	0	0	0	0
CO4	3	2	1	0	0	0	0	0	0	0
CO5	3	2	1	0	0	0	0	0	0	0
Avg	3	2	1	0	0	0	0	0	0	0

Justification for CO-PO mapping

CO1	Understand project management principles while developing software.
CO2	Describe the basic project management concepts,framework and the process models.
CO3	Understand about software prosess 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 :

Head of the Department :

Format No :231

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

		Higher Order Thinking	Projects / Mini Projects
L6	**LOT**	**HOT**	**Total**
0	9	0	9
0	9	0	9
0	9	0	9
0	9	0	9
0	9	0	9

0	45	0	45
0	100	0	100

PO11	PO12	PSO1	PSO2
0	0	3	2
0	0	3	2
0	0	3	2
0	0	3	2
0	0	3	2
0	0	3	2

Low level