

MOHAMMED SATHAK A J COLLEGE OF ENGINEERING

Siruseri IT park, OMR, Chennai - 603103

LESSON PLAN							
Department of				INFORMATION TECHNOLOGY			
Name of the	Object Oriented Analysis and Design			Name of the	Mrs. Sasikala.L		
Subject Code	CS8592			Year / Sem	III/VI		
Acad Year	2021-2022			Batch			
Course Objective							
1 . To understand the fundamentals of object modeling							
2 . To understand and differentiate Unified Process from other approaches.							
3 . To design with static UML diagrams.							
4 . To design with the UML dynamic and implementation diagrams.							
5 . To improve the software design with design patterns.6 . To test the software against its requirements specification							
Course Outcome							
Upon completion of the course, the students will be able to:							
1 . Express software design with UML diagrams							
2 . Design software applications using OO concepts.							
3 . Identify various scenarios based on software requirements							
4 . Transform UML based software design into pattern based design using design patterns							
5 . Describe the various testing methodologies for OO software							
Sl. No.	Topic(s)	T / R* Book	Periods Required	Mode of Teaching (BB / PPT /	Blooms Level (L1-L6)	CO	PO
UNIT-I UNIFIED PROCESS AND USE CASE DIAGRAMS							
1	Introduction to OOAD	T1	1	BB	L1	CO1	
2	OO Basics	T1	1	BB	L2	CO2	
3	Unified Process	T1	1	BB	L3	CO1	
4	UML diagrams	T1	1	PPT	L3	CO1	
5	Use Case	T1	1	BB	L2	CO1	
6	Case study –the Next Gen POS system	T1	1	PPT	L3	CO1	
7	Inception – Relating Use cases	T1	1	BB	L4	CO1	
8	Use case Modelling	T1	1	BB	L5	CO1	
9	Include, extend and generalization When to use Use-cases	T1	1	PPT	L1	CO1	
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
Evaluation method							
UNIT II STATIC UML DIAGRAMS							
10	Class Diagram	T1	1	BB	L2	CO3	
11	Elaboration – Domain Model	T1	1	BB	L2	CO3	
12	Finding conceptual classes and description	T1	1	BB	L2	CO3	
13	Associations	T1	1	BB	L4	CO3	
14	Attributes – Domain model refinement – Finding	T1	1	BB	L6	CO3	
15	Aggregation and Composition	W2	1	PPT	L2	CO5	
16	Relationship between sequence diagrams and use	W2	1	PPT	L6	CO5	
17	When to use Class Diagrams	T1	1	PPT	L6	CO3	
18	Model Practice	T1	1	PPT	L1	CO5	
Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
Evaluation method							
UNIT III DYNAMIC AND IMPLEMENTATION UML DIAGRAMS							
19	Dynamic Diagrams – UML interaction diagrams -	T1	1	BB	L1	CO2	
20	System sequence diagram	T1	1	BB	L3	CO2	
21	Collaboration diagram	T1	1	BB	L2	CO2	
22	When to use Communication Diagrams	T1	1	BB	L2	CO2	
23	State machine diagram and Modelling	T2	1	BB	L3	CO2	
24	Activity diagram – When to use activity diagrams	T1	1	PPT	L3	CO2	
25	UML package diagram - When to use package	W1	1	PPT	L1	CO1	
26	Component and Deployment Diagrams	W2	1	PPT	L2	CO1	
27	When to use Component and Deployment	W1	1	BB	L2	CO2	
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
Evaluation method							
UNIT IV DESIGN PATTERNS							
28	GRASP: Designing objects with responsibilities –	T1	1	BB	L1	CO4	
29	Creator – Information expert	T1	1	BB	L2	CO4	
30	Low Coupling – High Cohesion	T1	1	BB	L4	CO4	
31	Controller Design Patterns	T2	1	BB	L3	CO4	
32	creational – factory method	T2	1	BB	L2	CO4	
33	Structural – Bridge	T2	1	BB	L5	CO4	
34	Adapter – behavioural –Strategy	T1	1	PPT	L4	CO5	
35	Observer	W2	1	PPT	L1	CO4	
36	GoF design patterns& Mapping design to code	W2	1	PPT	L5	CO5	

Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any														
Evaluation method														
UNIT V APPLICATIONS														
37	Object Oriented Methodologies	T1	1	BB	L6	CO5								
38	Software Quality Assurance	T2	1	BB	L6	CO5								
39	Impact of object orientation on Testing	T1	1	BB	L6	CO5								
40	Testing description	T2	1	BB	L5	CO5								
41	Introduction to test cases	T2	1	PPT	L5	CO5								
42	Test plans	T1	1	PPT	L6	CO3								
43	Develop Test Cases and Test Plans	W2	1	BB	L5	CO4								
44	Review of all diagrams with example	W2	2	BB	L5	CO5								
Suggested Activity: Assignment / Case Studies / Tutorials/ Quiz / Mini Projects / Model Developed/others Planned if any														
Evaluation method														
Content Beyond the Syllabus Planned														
1	Plan to give the assignment : 1.Develop the use case diagram of payroll. 2. Develop the implementation and dynamic diagrams 3.Develop the various diagram with real time examples													
Text Books														
1	Craig Larman, "Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development", Third Edition, Pearson Education, 2005.													
2	Ali Bahrami - Object Oriented Systems Development - McGraw Hill International Edition - 1999													
Reference Books														
1	Erich Gamma, and Richard Helm, Ralph Johnson, John Vlissides, "Design patterns: Elements of Reusable Object-Oriented Software", Addison-Wesley, 1995.													
2	Martin Fowler, "UML Distilled: A Brief Guide to the Standard Object Modeling Language",													
Website / URL References														
1	W1: https://studentsfocus.com/cs8691-ai-notes-artificial-intelligence-notes-csc-6th-sem/													
2	W2: slideshare.net/AnushkaGhosh5/power-point-presentation-on-artificial-intelligence													
3	http://aimaterials.blogspot.com/p/blog-page_3.html (Unit 1,2)													
Blooms Level														
Level 1 (L1) : Remembering		Lower Order Thinking	Fixed Hour Exams	Level 4 (L4) : Analysing					Higher Order Thinking	Projects / Mini Projects				
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	L6	LOT	HOT	Total				
Unit 1	USE CASE DIAGRAMS	2	2	3	1	1	0	0	0	9				
Unit 2	STATIC UML DIAGRAMS	1	4	0	1	0	3	5	4	18				
Unit 3	DYNAMIC & IMPLEMENTATION	2	4	3	0	0	0	5	0	14				
Unit 4	DESIGN PATTERNS	2	2	1	2	2	0	4	0	13				
Unit 5	APPLICATIONS	0	0	0	0	5	4	4	2	15				
Total		7	12	7	4	8	7	18	8	69				
Total Percentage		10.1449	17.3913	10.1449	5.7971	11.5942	10.1449	26.087	11.5942	100				
CO PO Mapping														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	5	1	1	2	0	0	0	0	0	0	0	1		
CO2	2	3	3	0	0	0	0	0	0	0	0	0		
CO3	0	3	2	0	3	0	0	0	0	0	0	3		
CO4	1	3	2	0	1	0	0	0	0	0	0	0		
CO5	0	1	2	1	4	1	1	0	0	0	1	0		
Avg														
Justification for CO-PO mapping														
CO1	It involves basic OOAD													
CO2	It explained the various diagrams briefly													
CO3	Problem and design development of the real time UA process													
CO4	It analysis the implementation and design problems													
CO5	It described and implemented modern tool for UML													
3	High level		2	Moderate level			1	Low level						

Name & Sign of Subject Expert : Sasikala.L

MSAJCE