

SARDAR RAJA COLLEGE OF ENGINEERING, ALANGULAM

DEPARTMENT OF COMPUTER APPLICATIONS

MICRO LESSON PLAN



SUBJECT NAME : OBJECT ORIENTED ANALYSIS AND DESIGN

SUBJECT CODE : MC 9244

DEPT : MCA

YEAR/SEM : II/IV

Handled By

Mrs.P.UMA

Asst.Prof / MCA

UNIT I INTRODUCTION 12

An overview – Object basics – Object state and properties – Behavior – Methods – Messages – Information hiding – Class hierarchy – Relationships – Associations – Aggregations- Identity – Dynamic binding – Persistence – Metaclasses – Object oriented system development life cycle.

UNIT II METHODOLOGY AND UML 12

Introduction – Survey – Rumbaugh, Booch, Jacobson methods – Patterns – Frameworks – Unified approach – Unified modeling language – Static and Dynamic models – UML diagrams – Class diagram – Usecase diagrams – Dynamic modeling – Model organization – Extensibility.

UNIT III OBJECT ORIENTED ANALYSIS 12

Identifying Usecase – Business object analysis – Usecase driven object oriented analysis – Usecase model – Documentation – Classification – Identifying object, relationships, attributes, methods – Super-sub class – A part of relationships Identifying attributes and methods – Object responsibility

UNIT IV OBJECT ORIENTED DESIGN 12

Design process – Axioms – Corollaries – Designing classes – Class visibility – Refining attributes – Methods and protocols – Object storage and object interoperability – Databases – Object relational systems – Designing interface objects – Macro and Micro level processes – The purpose of a view layer interface

UNIT V SOFTWARE QUALITY 12

Quality assurance – Testing strategies – Object Orientation testing – Test cases – Test Plan – Debugging principles – Usability – Satisfaction – Usability testing – Satisfaction testing.

TOTAL =60 HOURS

TEXT BOOKS

Ali Bahrami, “Object Oriented System Development”, McGraw Hill International Edition, 1999.

Reference Books

1. Craig Larman, Applying UML and Patterns, 2nd Edition, Pearson, 2002.
2. Grady Booch, James Rumbaugh, Ivar Jacobson, “The Unified Modeling Language User Guide”, Addison Wesley Long man, 1999.
3. Bernd Bruegge, Allen H. Dutoit, Object Oriented Software Engineering using UML, Patterns and Java, Pearson 2004

DESCRIPTION

- Use UML to capture requirements and software designs
- Apply best practices of modeling and analysis and design
- Apply Rational Unified Process
- Use model transformation to generate code from models
- Use RSA reverse engineering features
- Apply fundamental design patterns
- Apply fundamental architectural patterns

OBJECTIVES

- Create analysis and design artifacts using UML notation.
- Follow an iterative, incremental use-case driven process.
- Develop complete use cases.
- Create conceptual models.
- Define contracts for system operations.

MICRO LESSON PLAN

Hours	LECTURE TOPICS	READING
UNIT I - INTRODUCTION		
1	An overview, Object basics, Object state and properties	T1
2	Messages, Methods, Behavior	T1
3	Class hierarchy, Information hiding	T1
4	Relationships	T1
5	Associations	T1
6	Aggregations	T1
7	Identity	T1
8	Persistence	T1
9	Meta classes	T1
10	Dynamic binding	T1
11	Object oriented system development life cycle (AV Class)	T1
12	Object oriented system development life cycle	T1
UNIT II - METHODOLOGY AND UML		
13	Introduction, Survey	T1
14	Rumbugh, Booch, Jacobson methods	T1
15	Patterns, Frameworks	T1
16	Unified approach	T1
17	Unified modeling language	T1
18	Static and Dynamic models	T1
19	UML diagrams (AV Class)	T1
20	Class diagram	T1
21	Usecase diagrams	T1
22	Dynamic modeling	T1

23	Model organization	T1
24	Extensibility	T1
UNIT III OBJECT ORIENTED ANALYSIS		
25	Identifying Usecase	T1
26	Business object analysis	T1
27	Usecase driven object oriented analysis	T1
28	Usecase model (AV Class)	T1
29	Documentation	T1
30	Classification	T1
31	Super-sub class	T1
32	Identifying object, relationships, attributes, methods	T1
33	Identifying object, relationships, attributes, methods	T1
34	A part of relationships Identifying attributes and methods	T1
35	A part of relationships Identifying attributes and methods	T1
36	Object responsibility	T1
UNIT IV OBJECT ORIENTED DESIGN		
37	Design process	T1
38	Axions, Corollaries	T1
39	Designing classes	T1
40	Class visibility	T1
41	Refining attributes	T1
42	Methods and protocols	T1
43	Object storage and object interoperability	T1
44	Databases, Object relational systems (AV Class)	T1
45	Designing interface objects	T1
46	Macro, Micro level processes	T1

47	Micro level processes	T1
48	The purpose of a view layer interface	T1
UNIT V SOFTWARE QUALITY		
49	Quality assurance	T1
50	Testing strategies (AV Class)	T1
51	Testing strategies	T1
52	Object orientation testing	T1
53	Test cases	T1
54	Test Plan	T1
55	Debugging principles	T1
56	Usability	T1
57	Satisfaction	T1
58	Usability testing	T1
59	Satisfaction testing	T1
60	Satisfaction testing	T1