CS6502 OBJECT ORIENTED ANALYSIS AND DESIGN   **L T P C3 0 0 3**

UNIT I UML DIAGRAMS 9

Introduction to OOAD – Unified Process - UML diagrams – Use Case – Class Diagrams– Interaction Diagrams – State Diagrams – Activity Diagrams – Package, component and Deployment Diagrams.

UNIT II DESIGN PATTERNS 9

GRASP: Designing objects with responsibilities – Creator – Information expert – Low Coupling – High Cohesion – Controller - Design Patterns – creational - factory method - structural – Bridge – Adapter -behavioural – Strategy – observer.

UNIT III CASE STUDY 9

Case study – the Next Gen POS system, Inception -Use case Modelling - Relating Use cases –include, extend and generalization - Elaboration - Domain Models - Finding conceptual classes and description classes – Associations – Attributes – Domain model refinement – Finding conceptual class Hierarchies - Aggregation and Composition.

UNIT IV APPLYING DESIGN PATTERNS 9

System sequence diagrams - Relationship between sequence diagrams and use cases Logical architecture and UML package diagram – Logical architecture refinement - UML class diagrams – UML interaction diagrams - Applying GoF design patterns.

UNIT V CODING AND TESTING 9

Mapping design to code – Testing: Issues in OO Testing – Class Testing – OO Integration Testing –GUI Testing – OO System Testing.

TEXT BOOK:

1. Craig Larman, "Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development", Third Edition, Pearson Education, 2005.

REFERENCES:

1. Simon Bennett, Steve Mc Robb and Ray Farmer, "Object Oriented Systems Analysis and

Design Using UML", Fourth Edition, Mc-Graw Hill Education, 2010.

2. Erich Gamma, and Richard Helm, Ralph Johnson, John Vlissides, "Design patterns:

Elements of Reusable Object-Oriented Software", Addison-Wesley, 1995.

3. Martin Fowler, "UML Distilled: A Brief Guide to the Standard Object modelling Language",

Third edition, Addison Wesley, 2003.

4. Paul C. Jorgensen, "Software Testing: A Craftsman"s Approach", Third Edition, Auerbach

Publications, Taylor and Francis Group, 2008.