# H.N.G. University, Patan M.C.A(5 Years Integrated Programme) SEMESTER - VII 704 : Object Oriented Analysis & Design with UML

### Unit : 1

The object Oriented Paradigm, Management of Object Oriented Software Projects, Object Oriented Analysis: Domain Analysis, Generic components of the Analysis Model, The A Process, The Object-Relationship Model, The Object-Behavior Model, Object Oriented Design: Design for Object Oriented Systems, The System Design Process, The Object Design Process, Design Patterns

### Unit : 2

Introduction to Web Engineering, Web Engineering team, Analysis for Web Application: Requirements Analysis for Web Apps, The Analysis Model for Web Apps, The content Model, The Interaction Model, The Functional Model, The Configuration Model, Relationship-Navigation Analysis, Design for We Apps: Design Issues for Web Engineering, The Web E-Design Pyramid, Web App Interface Design, Aesthetic Design, Content Design, Architecture Design, Navigation Design, Component level Design, Hypermedia Design Patterns, Object-Oriented Hypermedia Design Method

### Unit : 3

Introduction to UML, Classes, Advanced Classes, Relationships, Advanced Relationships, Interfaces, types, Roles, Packages, Class Diagram, Use-case Diagram

### Unit : 4

Interaction Diagram: Sequence Diagram, Collaboration Diagram, Forward and Reverse Engineering, Activity Diagram, State Chart Diagram, Patterns and Frameworks, Component Diagram, Deployment Diagram

#### Text Books:

- 1. Software Engineering By Roger S. Pressman Fifth Edition McGraw Hill Publications
- 2. Software Engineering By Roger S. Pressman Sixth Edition McGraw Hill Publications
- 3. The Unified Modeling Language User Guide By Booch, Rumbaugh, Jacobson Low Price Edition Publication

#### **Reference Books:**

1. Use Case Driven Object Modeling with UML, Doug Rosenberg

- 2. Object Oriented Software Engineering, Ivan Jacobson
- 3. Object Technology Application Development, Daniel Tkach and Richard Puttick

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