

ST. ANN'S COLLEGE OF ENGINEERING & TECHNOLOGY: CHIRALA
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LESSON PLAN

Subject: UML & Design Patterns
Name : Mr. D. N.V. SYAM KUMAR

Academic Year: 2017-18
Year & Sem/Section: IV-I-SEM 'C'

Unit No.	Sub Topic Names	No. of classes required
I	Unit I: Introduction : Introduction to OOAD; typical activities/workflows / disciplines in OOAD, Introduction to iterative development and the Unified Process, Introduction to UML; mapping disciplines to UML artifacts, Introduction to Design Patterns - goals of a good design, Introducing a case study & MVC architecture	12
II	Unit II: Inception: Artifacts in inception, Understanding requirements - the FURPS model, Understanding Use case model - introduction, use case types and formats, Writing use cases - goals and scope of a use case, elements / sections of a use case, Use case diagrams, Use cases in the UP context and UP artifacts, Identifying additional requirements, Writing requirements for the case study in the use case model	9
III	Unit III: Elaboration: System sequence diagrams for use case model, Domain model : identifying concepts, adding associations, adding attributes, Interaction Diagrams, Introduction to GRASP design Patterns ,Design Model: Use case realizations with GRASP patterns, Design Class diagrams in each MVC layer Mapping Design to Code, Design class diagrams for case study and skeleton code	7
IV	Unit 4: More Design Patterns: Fabrication, Indirection, Singleton, Factory, Facade, Publish-Subscribe	8
V	Unit 5: More UML diagrams: State-Chart diagrams, Activity diagrams, Component Diagrams, Deployment diagrams, Object diagrams.	7
VI	Unit 6: Advanced concepts in OOAD : Use case relationships, Generalizations Domain Model refinements, Architecture, Packaging model elements	5
TOTAL		48

TEXT BOOKS:

1. 'Applying UML and patterns' by Craig Larman, Pearson
2. Object-Oriented Analysis & Design with the Unified Process by Satzinger, Jackson & Burd
Cengage Learning
3. 'UML distilled' by Martin Fowler, Addison Wesley, 2003

REFERENCE BOOKS:

1. O'reilly's 'Head-First Design Patterns' by Eric Freeman et al, Oreilly
2. UML 2 Toolkit, by Hans-Erik Eriksson, Magnus Penker, Brian Lyons, David Fado: WILEY'-
Dramatic India Pvt. Lid.

FACULTY MEMBER

HEAD OF THE DEPARTMENT