

Appendix -3: Object Oriented Analysis & Design

ITE301	OBJECT ORIENTED ANALYSIS AND DESIGN	LTPC	3	0	0	3
Version No.	1.0					
Aim	To learn and apply object oriented way of Analysis and Design of Software					
Prerequisite	ITE201					
Objectives	<ul style="list-style-type: none">• To know the elements of object oriented programming• To learn UML representation diagrams• To use the Unified Process Model for Analysis of software development phase• To use the Unified Process Model for Design of software development phase					
Outcomes	<ul style="list-style-type: none">• Learning object oriented analysis and design methodology• Applying the OOAD in software development					
Unit 1	Introduction					8 Hrs
Structure of Complex Systems, Decomposing Complexity - Elements of Analysis and Design, Object Modeling - Unified Process - Phases of Unified Process – Intro to UML as an Analysis and Design Tool						
Unit 2	UML Diagrams					10 Hrs
Diagrams: Class Diagrams, State Transition Diagrams, Object Diagrams, Interaction Diagrams, Module Diagrams, Process Diagrams, Use case Diagrams, Activity Diagrams, Collaboration Diagrams, (all 14 diagrams) – Mapping of Diagrams to Analysis and Design Components						
Unit 3	O-O Analysis					9 Hrs
Elements of Analysis – Requirements Workflow – Analysis Workflow - Mapping of Elements onto Phases of Unified Process – UML Diagrams for Analysis – Iterations – Case Study						
Unit 4	O-O Design					9 Hrs
Elements of Design – O-O Design Workflow – Mapping of Elements onto Phases of Unified Process – UML Diagrams for Design – Iterations – Case Study						
Unit 5	Management and Planning					9 Hrs
Benefits and Risks of Object Oriented Development – Macro and Micro Process Development – Staffing and Teaming – Testing and Release Management – Reuse, Quality Assurance and Metrics – Documentation and Tools						
Text Books: <ul style="list-style-type: none">1. Grady Booch, “Object Oriented Analysis and Design with Application”, Addison Wesley, 20082. Craig Larman, “Applying UML and Patterns”, Pearson Education, 2002 or later						
Reference Books: <ul style="list-style-type: none">1. Scott W. Ambler and L.L. Constantine, “The Unified Process” (4 Parts), CMP Books, 20002. I. Jacobson et al, “The Unified Software Development Process”, Addison Wesley, 20003. Ali Bahrami, “Object Oriented Systems Development”, McGraw-Hill, 19994. Schach and Stephen R., "An Introduction to Object-Oriented Systems Analysis and Design with UML and the Unified Process", Tata McGraw Hill, 20035. Charles Richter, “Designing Flexible Object-Oriented Systems with UML”, Techmedia, 2000						
Mode of Evaluation		CAT, Quiz, Seminar/Assignment, TEE				
Date of Recommendation by BoS		24-07-2010				
Date of Approval by AC		nn th Academic Council held on dd-mm-yyyy				