

18CSPE606		OBJECT ORIENTED ANALYSIS AND DESIGN	L	T	P	C
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<b>Course Objectives:</b>						
1.	To understand the fundamentals of object modelling.					
2.	To understand and differentiate Unified Process from other approaches.					
3.	To design with static UML diagrams.					
4.	To design with the UML dynamic and implementation diagrams.					
5.	To map the design properly to code					
<b>UNIT I</b>	<b>INTRODUCTION</b>			<b>9</b>	<b>+</b>	<b>0</b>
The system life cycle - Traditional life cycle models - The object-oriented approach - The Rational Unified Process (RUP) - The Unified Modeling Language (UML) - UML models - Introduction to the case study - Requirements for the Wheels case study system - Requirements engineering - Requirements elicitation - List of requirements for the Wheels system - Use cases - Use case diagram - Use case descriptions- Actors and actor descriptions - Use case relationships: communication association, include and extend - Boundary - Using the use case model in system development.						
<b>UNIT II</b>	<b>OBJECTS AND CLASSES</b>			<b>9</b>	<b>+</b>	<b>0</b>
Basics – Object – classes - Relationships between classes - The class diagram - Stages in building a class diagram - Packages - Using the class diagram in system development.						
<b>UNIT III</b>	<b>IDENTIFYING FUNCTIONALITIES</b>			<b>9</b>	<b>+</b>	<b>0</b>
Introduction - CRC cards and interaction diagrams - Identifying operations using the CRC card technique - Interaction diagrams - Specifying operations - Using the CRC cards and interaction diagrams in system development - State Diagrams - States and events - Constructing a state diagram - Using state diagrams in system development.						
<b>UNIT IV</b>	<b>ACTIVITY DIAGRAMS</b>			<b>9</b>	<b>+</b>	<b>0</b>
Introduction - Modeling a sequence of activities - Modeling alternative courses of action - Modeling iteration of activities - Modeling activities that are carried out in parallel – Swimlanes - Design - Architecture - Implementation diagrams The user interface Dealing with persistent data.						
<b>UNIT V</b>	<b>DESIGNING OBJECTS AND CLASSES</b>			<b>9</b>	<b>+</b>	<b>0</b>
Introduction - class diagram - Interaction diagrams. Implementation of class diagram - The code - Sequence diagram.						
<b>Total (L+T)= 45 Periods</b>						

<b>Course Outcomes:</b>	
Upon completion of this course, the students will be able to:	
CO1	: Identify various scenarios based on software requirements
CO2	: Express software design with UML diagrams
CO3	: Understand the various testing methodologies for OO software
<b>Text Books:</b>	
1.	Carol Britton and Jill Doake, "A Student Guide to Object - Oriented Development", Elsevier, Butterworth – Heinemann, Eighth edition, 2007.
<b>Reference Books:</b>	
1.	Brett McLaughlin, Gary Pollice and David West, "Head First Object-Oriented Analysis and Design: A Brain Friendly Guide to OOA&D", O'Reilly, Shroff Publishers & Distributors Pvt. Ltd., 2008.
2.	Mahesh P. Matha, "Object Oriented Analysis and Design using UML", Prentice-Hall of India, 2008.