

Object-Oriented Analysis with UML

Objectives <ul style="list-style-type: none"> Review object-oriented concepts Review Unified Modeling Language® (UML®) principles Learn fundamental process pattern for object-oriented analysis and design Learn how to derive analysis model from use case requirements Learn how to model event-driven state of objects 		Description <p><i>Object-Oriented Analysis with UML</i> teaches the analyst the fundamental techniques to apply the Unified Modeling Language (UML 2.0) to building an analysis model for a software application. The course begins with a refresher of basic object-oriented principles and the UML. A “universal” process pattern is presented for modeling the behavior and structure of dynamic systems. UML collaborations are applied to capture the behavior and structure using communication, sequence, and class diagrams. This pattern is first applied to deriving a platform-independent analysis model from a use case model. Three different types of analysis classes are discussed when building this technology agnostic model: boundary, control, and entity classes. The course finishes with an introduction of how to apply state modeling to business entity classes. Students learn to apply the graphical notation for three UML diagrams – communication, class, and state machine diagrams. On-hands classroom experience allows for successful application of object-oriented modeling techniques.</p>	
		Course Outline (Modules and Topics) <ul style="list-style-type: none"> OO and UML Refresher <ul style="list-style-type: none"> Object-oriented concepts UML principles Architecture Overview <ul style="list-style-type: none"> Definition of software architecture 2+9+1 modeling framework Model-Driven Architecture® (MDA®) Collaborations <ul style="list-style-type: none"> Major models of a software system Relationships between the models Universal process pattern for OO analysis and design Formalizing the universal process pattern with collaborations Analyze Use Cases <ul style="list-style-type: none"> Apply universal design process pattern to use cases Analysis classes: boundary, control and entity Modeling use case structure and behavior with UML collaborations UML communication diagrams for behavior UML class diagrams for structure Modeling State <ul style="list-style-type: none"> UML statechart diagrams States and transitions Events, guards, actions, and activities <p><i>This course is also available in a one-day version (without architecture and state modeling) for integrating with use case training</i></p>	
Duration 2 days	Course # 01-0101	Prerequisites <ul style="list-style-type: none"> Software development experience Knowledge and/or introductory experience with object-oriented concepts Understanding of UML and use cases – or – UML Fundamentals and Use Case Modeling Fundamentals courses 	
Audience <ul style="list-style-type: none"> Business analyst System analyst Project lead Architect/designer Developer/programmer Test analyst 		Continuing education <ul style="list-style-type: none"> Object-Oriented Design with UML User Interaction Design with UML Test Case Design with UML 	
		Classroom requirements <ul style="list-style-type: none"> No computers required 	
		In partnership with	

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