

# Sparx Enterprise Architect System Development

<b>Objectives</b> <ul style="list-style-type: none"> <li>Learn how to apply key features of Sparx Enterprise Architect for             <ul style="list-style-type: none"> <li>System development</li> <li>Object-oriented analysis and design</li> </ul> </li> <li>Build integrated set of system models             <ul style="list-style-type: none"> <li>Domain model</li> <li>System use case model</li> <li>Analysis model</li> <li>High-level design model</li> <li>Detailed design model</li> </ul> </li> <li>Diagrams covered             <ul style="list-style-type: none"> <li>Class diagram</li> <li>Use case diagram</li> <li>State machine diagram</li> <li>Activity diagram</li> <li>Communication diagram</li> <li>Sequence diagram</li> <li>Package diagram</li> <li>Component diagram</li> </ul> </li> </ul>		<b>Description</b> <p><i>Enterprise Architect System Development</i> provides students with a hands-on opportunity for learning how to capture system analysis and design models with the Unified Modeling Language 2.0 (UML) with Sparx Enterprise Architect (EA). Starting with an overview of EA, students will learn how to create, delete, and move model elements, draw relationships, review various tool configuration options and model structuring and organization guidelines. Students begin building a domain model using class diagrams and then create actors and use cases to build a use case model. Modeling of state-driven behavior is covered through the use of state machine diagrams. The system's workflow is modeled using activity diagrams. Then students create the structure for capturing the design of a use case using use case realizations. The course then goes through how to build sequence and class diagrams for a use case realization. Then students learn how to model subsystems and interfaces and their internal design using a subsystem interface realization. Most class time is used for students to do hands-on lab exercises following a step-by-step workbook.</p>	
		<b>Course Outline (Modules and Topics)</b> <ul style="list-style-type: none"> <li>Build Domain Model             <ul style="list-style-type: none"> <li>EA workspace configuration</li> <li>Business analysis model</li> <li>Business domains and entities</li> <li>Relationships and element lists</li> </ul> </li> <li>Build Use Case Model             <ul style="list-style-type: none"> <li>Use cases, actors, and packages</li> <li>Use case diagrams</li> </ul> </li> <li>Model Entity State             <ul style="list-style-type: none"> <li>States, transitions, events</li> <li>Guards, actions, activities</li> <li>Map operations to events</li> </ul> </li> <li>Model System Workflow             <ul style="list-style-type: none"> <li>Activity diagram</li> <li>Activities, synchronization bars</li> <li>Transitions, decisions, guards</li> </ul> </li> <li>Model Analysis Realization             <ul style="list-style-type: none"> <li>Analysis model</li> <li>Collaborations and analysis realizations</li> <li>Participants diagram</li> <li>Analysis model organization</li> <li>Sequence diagrams</li> </ul> </li> <li>Model Subsystems             <ul style="list-style-type: none"> <li>Sequence and class diagrams</li> <li>Architectural pattern</li> <li>Subsystems and interfaces</li> <li>Subsystem interface realizations</li> <li>Class and sequence diagrams</li> <li>Subsystem dependencies</li> <li>Application Interaction</li> </ul> </li> </ul>	
<b>Duration</b> 1 day	<b>Course #</b> 21-0615	<b>Prerequisites</b> <ul style="list-style-type: none"> <li>Use Case Modeling Fundamentals course</li> <li>Object-Oriented Analysis with UML course</li> <li>Object-Oriented Design with UML course</li> </ul>	<b>In partnership with</b>
<b>Audience</b> <ul style="list-style-type: none"> <li>Business architect</li> <li>System analyst</li> <li>System engineer</li> <li>Software architect</li> <li>Data modeler</li> <li>Software designer</li> <li>Test designer</li> <li>Developer</li> </ul>		<b>Continuing education</b> <ul style="list-style-type: none"> <li>Enterprise Architect Business Architecture</li> <li>Enterprise Architect Business Process Modeling</li> </ul>	
		<b>Classroom requirements</b> <ul style="list-style-type: none"> <li>Sparx Enterprise Architect</li> </ul>	