



# UML 2.0 - The Unified Modeling Language

**Duration:** 2 Days

### Course Description

The students will learn how to define and design objects, classes, and the relationships among them, which includes links, associations, and inheritance. Strong emphasis is on the notation for use cases, class and object diagrams, links and associations, and messages. The course utilizes UML 2.0 notation.

### Audience

This course is intended for analysts, designers, and programmers responsible for applying object-oriented techniques in their software engineering projects.

### Prerequisites

The students should have experience in software development and some familiarity with basic concepts of object orientation.

### Course Outline

#### UML 2.0 and its models

##### Use Cases

- What are Use Cases?
- Use Case Diagram Components
- Actor Generalizations
- Use Case Associations: Include, Extend, Require, Generalization
- External Systems
- Narrative with template

##### Classes and Objects

- Discovering classes and objects
- Discovering object relationships
- Describing the static model in UML
- Describing class associations in UML

##### Associations

- Dependencies

#### Communication Diagrams

- The basic notation
- Communication and Object Diagrams
- Duality with Sequence Diagrams

#### State Machine Diagrams

- States and their Notation
- Transitions and Guards
- Registers and Actions
- Internal Transitions
- Superstates and Substates
- Concurrent States

#### Activity Diagrams

- Activities and Actions
- Decisions and Merges
- Synchronization
- Iteration
- Partitions
- Parameters and Pins



## Sterlink Training

# Object-Oriented Technology Curriculum

- Associations
- Instance Creation
- Multiplicity
- Qualified Associations
- Association Classes
- Composition and Aggregation

- Expansion Regions

### New Models in UML 2.0

- Composite Structure Diagrams
- Timing Diagrams
- Interaction Overview Diagrams

### Behaviour Modeling

#### Sequence Diagrams

- The basic notation
- Interaction Frames
- Decisions and Loops
- Creating and Destroying Objects
- Activation
- Synchronous & Asynchronous Messages

### Package, Component, and Deployment Diagrams

- Modeling Groups of Elements - Package Diagrams
- Visibility and Importing
- Structural Diagrams
- Components and Interfaces
- Deployment Diagram

### Best Practices for each Diagram

### For more information about this and other offerings

Please contact Sterlink Data Systems at (416) 859-6470 or email us at [training@sterlink.ca](mailto:training@sterlink.ca)

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