



OCSMP Accelerator™ SysML Training Course (Online, On-Demand)

Effective Date: 15 March, 2016

Module	Topic	Availability	Duration	
1	Block Definition Diagrams (Part 1)	On Demand, Unlimited Access	2:51 hr	
2	Block Definition Diagrams (Part 2)	On Demand, Unlimited Access	3:02 hr	
3	Internal Block Diagrams	On Demand, Unlimited Access	2:54 hr	
4	Use Case Diagrams	On Demand, Unlimited Access	2:30 hr	
5	Activity Diagrams (Part 1)	On Demand, Unlimited Access	2:44 hr	
6	Activity Diagrams (Part 2)	On Demand, Unlimited Access	2:48 hr	
7	Sequence Diagrams (Part 1)	On Demand, Unlimited Access	2:46 hr	
8	Sequence Diagrams (Part 2)	On Demand, Unlimited Access	1:54 hr	
9	State Machine Diagrams (Part 1)	On Demand, Unlimited Access	1:52 hr	
10	State Machine Diagrams (Part 2)	On Demand, Unlimited Access	2:36 hr	
11	Constraints and Parametric Diagrams	On Demand, Unlimited Access	2:41 hr	
12	Package Diagrams	On Demand, Unlimited Access	2:40 hr	
13	Requirements Diagrams	On Demand, Unlimited Access	2:48 hr	
14	Allocation Relationships	On Demand, Unlimited Access	2:08 hr	Price
		Total	35.8 hr	449 USD

Course textbook:

Delligatti, Lenny. *SysML Distilled: A Brief Guide to the Systems Modeling Language*. Boston: Addison-Wesley, 2013.

<http://www.delligattiassociates.com/publications/>

Module 1: Block Definition Diagrams (Part 1)

Coverage: purpose of a BDD, frame of a BDD, elements of definition versus elements of usage, blocks, part properties, reference properties, value properties, constraint properties, standard ports, interfaces, nonatomic flow ports, flow specifications, flow properties, atomic flow ports, operations, receptions, signals

Module 2: Block Definition Diagrams (Part 2)

Coverage: reference associations, composite associations, generalizations, dependencies, actors, primitive value types, structured value types, enumerations, constraints, constraint blocks, comments, designing to abstractions

Module 3: Internal Block Diagrams

Coverage: purpose of an IBD, frame of an IBD, part properties, reference properties, connectors, flow ports, standard ports, port compatibility, item flows, nested properties, dot notation, encapsulation

Module 4: Use Case Diagrams

Coverage: purpose of a use case diagram, use cases, use case specifications, use cases versus scenarios, frame of a use case diagram, system boundary, actors, associations, base use cases, included use cases, extending use cases

Module 5: Activity Diagrams (Part 1)

Coverage: purpose of an activity diagram, frame of an activity diagram, activities, object tokens, control tokens, basic actions, opaque expressions, object nodes, pins, activity parameters, streaming versus nonstreaming, object flows, control flows, criteria for initiating an action

Module 6: Activity Diagrams (Part 2)

Coverage: call behavior actions, send signal actions, accept event actions, wait time actions, absolute time events, relative time events, initial nodes, activity final nodes, flow final nodes, decision nodes, merge nodes, fork nodes, join nodes, activity partitions

Module 7: Sequence Diagrams (Part 1)

Coverage: purpose of a sequence diagram, frame of a sequence diagram, interactions, lifelines, selector expressions, event occurrences, messages, message send occurrences, message receive occurrences, asynchronous messages, synchronous messages, reply messages, create messages, creation occurrences, delete messages, destruction occurrences, execution specifications, execution start occurrences, execution termination occurrences, valid traces versus invalid traces

Module 8: Sequence Diagrams (Part 2)

Coverage: time constraints, duration constraints, state invariants, combined fragments, operands, *opt* interaction operator, *alt* interaction operator, *loop* interaction operator, *par* interaction operator, interaction uses, actual gates, formal gates

Module 9: State Machine Diagrams (Part 1)

Coverage: purpose of a state machine diagram, frame of a state machine diagram, state machines, simple states, *entry* behavior, *do* behavior, *exit* behavior, composite states, substates, final states, transitions, triggers, guards, effects, self-transitions, run-to-completion step semantics, external transitions versus internal transitions

Module 10: State Machine Diagrams (Part 2)

Coverage: signal events, receptions, call events, operations, absolute time events, relative time events, change events, initial pseudostates, junction pseudostates, regions

Module 11: Constraints and Parametric Diagrams

Coverage: blocks and constraint blocks (on BDDs), purpose of a parametric diagram, frame of a parametric diagram, constraint properties, constraint parameters, value properties, nesting notation versus dot notation, binding connectors, noncausal nature of constraints

Module 12: Package Diagrams

Coverage: purpose of a package diagram, frame of a package diagram, packages, namespaces, namespace containment, crosshair notation, nesting notation, fully qualified name strings, relative qualified name strings, dependencies, package import relationships, models, model libraries, profiles, stereotypes, views, viewpoints, conform relationships

Module 13: Requirements Diagrams

Coverage: purpose of a requirements diagram, frame of a requirements diagram, requirements, containment relationships, trace relationships, derive requirement relationships, refine relationships, satisfy relationships, verify relationships, direct notation, compartment notation, callout notation, matrices, tables, rationale

Module 14: Allocation Relationships

Coverage: purposes of allocation relationships, behavioral allocations, structural allocations, requirements allocations, direct notation, compartment notation, callout notation, matrices, tables, allocation activity partitions, allocation of definition versus allocation of usage