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### On-Demand OCSMP Overdrive™ Training Course Syllabus

**Course Title:** On-Demand OCSMP Overdrive™ Advanced Behavioral Modeling Training Course

#### Objectives

- Enable participants to effectively model dynamic system behavior with the full set of SysML behavioral modeling concepts and elements
- Familiarize students with the structure of the Systems Modeling Language (the Metamodel) to support effective application of SysML in all contexts
- Enable participants to independently understand and navigate the SysML and UML specifications to support self-guided learning and advanced modeling tasks
- Prepare candidates for behavioral modeling and language structure topics in the *OMG Certified Systems Modeling Professional (OCSMP) Model Builder Intermediate (Level 3)* certification exam

#### Duration

- 8 hours, 47 minutes of self-paced modules delivered on demand through the Delligatti Associates Learning Center

#### Training materials (electronic files downloadable from Delligatti Associates Learning Center):

- Course completion certificate. This certificate is valid documentation to claim recertification Professional Development Units (PDUs) for technical certifications (e.g., INCOSE CSEP, IEEE CSDP)
- 26 *OCSMP Model Builder Intermediate (Level 3)* certification exam sample questions, completing the full set of SysML behavioral modeling concepts and elements in the exam coverage map
- SysML and MBSE Resources Guide with links to relevant specifications and reading material

#### Training materials/equipment (provided by Client):

- A copy of a companion textbook, *SysML Distilled: A Brief Guide to the Systems Modeling Language* (The book may be purchased from any retail bookseller such as Amazon, Barnes & Noble, and in electronic format from the publisher's online store [www.informit.com](http://www.informit.com))
- Computer with high-speed internet connection and the ability to stream video content from Vimeo. (Note: the course is accessed via the Delligatti Associates Learning Center learning management

system which uses Vimeo to stream the training videos. Some organizations' IT policies prevent streaming from Vimeo, in which case we recommend learners access the course from outside their organization's IT network, to include disabling their work VPN.)

## Scope of Coverage

This course consists of the following modules:

Module	Topic	Duration (h:mm)
0	Introduction	0:11
1	Activity Diagrams	3:22
2	Sequence Diagrams	1:51
3	State Machine Diagrams	3:21

Detailed breakdown of concepts by topic:

**Module 1:** Building **activity diagrams** using the full range of SysML constructs, such as:

- Advanced token flow semantics (e.g., decision inputs, rates, probabilities, control values)
- Advanced object node concepts (e.g., token ordering, overwrite/no-buffer, data stores, central buffers, parameter sets, object node state)
- Interruptible regions
- Structural feature actions and defining properties in activities

**Module 2:** Building **sequence diagrams** using the full range of SysML constructs, such as:

- Advanced interaction operators: Break, Strict, Neg, Critical, Consider/Ignore, Assert
- Combining and nesting of interaction operators
- “General ordering” semantics

**Module 3:** Building **state machine diagrams** using the full range of SysML constructs, such as:

- Composite and orthogonal states, and state hierarchy
- Deferred events
- Pseudostates: history (shallow and deep), choice, fork, join, entry/exit points, and terminate
- Submachine states

## OCSMP Certification

The course fee does not include the cost of the OCSMP certification exam. Each participant who wishes to pursue this certification after the course ends must individually schedule and pay for the exam via the Pearson Vue website.

## Cost

Item	Rate
On-demand OCSMP Overdrive™ Advanced Behavioral Modeling Course 6-month Subscription	Price for single 6-month subscription: \$350 / participant <u>Bulk purchase tiers:</u> <ul style="list-style-type: none"><li>• Tier 1 - minimum purchase of 25 seats: \$315 / participant</li><li>• Tier 2 - minimum purchase of 50 seats: \$280 / participant</li><li>• Tier 3 - minimum purchase of 100 seats: \$245 / participant</li></ul>

## Payment Terms

- Individual seats up to a quantity of 25 can be purchased via credit card in our [online store \(https://ei194.infusionsoft.com/app/manageCart/addProduct?productId=238\)](https://ei194.infusionsoft.com/app/manageCart/addProduct?productId=238).
- For bulk purchases, Delligatti Associates will electronically submit one invoice to the Client in accordance with Client's invoicing instructions. The Client will pay the invoice at the standard rate listed above upon receipt of the invoice or in accordance with mutually agreed payment terms. Client will remit payment on the invoice either by credit card or via ACH electronic funds transfer (EFT).

## Terms and Conditions of Service

- For purchases made in the online store, buyers will receive an automated confirmation email with access codes and instructions for accessing the training in the Delligatti Associates Learning Center. To help ensure delivery of this email, please be sure to add the delligattiassociates.com domain to your safe senders list. Buyers purchasing this course on behalf of others (i.e., you are not the participant), will need to provide the access code(s) and instructions to the participant(s).
- For purchases made by purchase order and invoiced by other means, Delligatti Associates will email a list of access codes along with instructions for learners to redeem them to the client's point of contact (POC) within one (1) business day of Delligatti Associates receiving payment.
- Access codes are valid for six (6) months from the date they are provided to the client POC. Once a learner redeems an access code, they will have access to the On-demand OCSMP Overdrive™ Advanced Behavioral Modeling Course until the end of the period of service.
- Access codes for the On-demand OCSMP Overdrive™ Advanced Behavioral Modeling Course cannot be traded for access codes for other courses that Delligatti Associates offers.

- Each access code may only be redeemed once by a single named individual. Access codes are not transferrable once redeemed.
- Access codes not redeemed prior to the period of service end date will be forfeited. No refunds will be provided for unused access codes.

### **Training Content Terms of Use**

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- Delligatti Associates retains ownership of our training materials. The Client does not gain joint ownership of these training materials. Delligatti Associates grants paid participants of our training courses the right to use the content provided during training in their daily engineering work. Use of the training materials to provide training to others, either internally or externally, is strictly prohibited.

## Appendix A

### OCSMP Overdrive™ Advanced Behavioral Modeling Course Content Durations

#### Summary

Total Course Duration: 8 hours, 47 minutes, 8 seconds

Average Module Duration: 2 hours, 51 minutes, 50 seconds

Longest Module (Module 1): 3 hours, 22 minutes, 42 seconds

Longest Segment (Module 1 Segment 13): 27 minutes, 18 seconds

<u>Content Item</u>	<u>Content Description</u>	<u>Duration</u> <u>(h:mm:ss)</u>
<b>Module 0</b>	<b>Course Introduction</b>	<b>0:11:38</b>
Segment 1	Course Introduction and Instructor Bio	0:11:38
<b>Module 1</b>	<b>Activity Diagrams</b>	<b>3:22:42</b>
Segment 1	Coverage Map and Object Nodes Review	0:07:07
Segment 2	Checkpoint Question 1.1 – Streaming Parameters	0:06:24
Segment 3	Rates (Continuous and Discrete)	0:06:55
Segment 4	Checkpoint Question 1.2 – Rates	0:04:03
Segment 5	No-buffer, Overwrite, Token Ordering	0:12:34
Segment 6	Checkpoint Question 1.3 – No-buffer, Overwrite, Token Ordering	0:06:34
Segment 7	Central Buffers, Datastores, Object Node States	0:14:31
Segment 8	Checkpoint Question 1.4 – Central Buffers	0:03:10
Segment 9	Checkpoint Question 1.5 - Datastores	0:03:22
Segment 10	Checkpoint Question 1.6 - Object Node State	0:03:48
Segment 11	Parameter Sets and Probabilities	0:13:08
Segment 12	Checkpoint Question 1.7 – Parameter Sets	0:03:10
Segment 13	Decision Inputs and Decision Input Flows	0:27:18
Segment 14	Checkpoint Question 1.8 – Decision Input Flows	0:07:23
Segment 15	Join Specifications and Control Pins	0:15:11
Segment 16	Checkpoint Question 1.9 – Join Specifications	0:03:51
Segment 17	Checkpoint Question 1.10 – Control Pins	0:02:51
Segment 18	Interruptible Regions and the Language Metamodel	0:25:28
Segment 19	Checkpoint Question 1.11 – Interruptible Regions	0:04:42
Segment 20	Structural Feature Actions and Defining Properties in Activities	0:22:34
Segment 21	Checkpoint Question 1.12 – Structural Feature Actions	0:08:38
<b>Module 2</b>	<b>Sequence Diagrams</b>	<b>1:51:26</b>
Segment 1	Messages Review	0:08:59
Segment 2	Checkpoint Question 2.1 – Messages	0:05:11
Segment 3	Lifelines Review	0:12:54
Segment 4	Combined Fragments	0:12:52
Segment 5	“Break” Combined Fragments	0:08:42
Segment 6	Checkpoint Question 2.2 – Combined Fragments	0:07:47
Segment 7	“Strict”, “Neg”, and “Critical” Combined Fragments	0:08:38

Segment 8	Checkpoint Question 2.3 – More Combined Fragments	0:04:46
Segment 9	“Consider / Ignore” Fragments	0:13:27
Segment 10	Checkpoint Question 2.4 – “Consider / Ignore” Fragments	0:04:59
Segment 11	“Assert” Combined Fragments	0:04:53
Segment 12	Checkpoint Question 2.5 – “Assert” Combined Fragments	0:06:58
Segment 13	Combining and Nesting Operators, General Ordering	0:11:20
<b>Module 3</b>	<b>State Machine Diagrams</b>	<b>3:21:22</b>
Segment 1	State Machines Review	0:08:12
Segment 2	Event Processing and Deferred Triggers	0:20:19
Segment 3	Checkpoint Question 3.1 – Event Processing and Deferred Triggers	0:05:59
Segment 4	State Hierarchy	0:14:56
Segment 5	Checkpoint Question 3.2 – State Hierarchy and Event Processing	0:04:04
Segment 6	Checkpoint Question 3.3 – State Hierarchy and Nested States	0:09:14
Segment 7	Fork and Join Pseudo States	0:12:29
Segment 8	Choice Pseudo States	0:15:56
Segment 9	Checkpoint Question 3.4 – Pseudo States	0:07:11
Segment 10	History Pseudo States	0:25:12
Segment 11	Completion Events	0:09:04
Segment 12	Checkpoint Question 3.5 – Deep History Pseudo States	0:08:07
Segment 13	Checkpoint Question 3.6 – Shallow History Pseudo States	0:06:10
Segment 14	Terminate Pseudo States and Entry and Exit Points	0:12:51
Segment 15	Checkpoint Question 3.7 – Terminate Pseudo States, Exit Points	0:03:59
Segment 16	Checkpoint Question 3.8 – Terminate Pseudo States, Entry Behavior	0:05:10
Segment 17	Submachine States	0:16:36
Segment 18	Checkpoint Question 3.9 – Submachine States	0:07:46
Segment 19	Further Resources and Next Steps	0:08:07