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Live Online OOSEM Accelerator™ MBSE Methodology Training Course Syllabus

Course Title: Live Online OOSEM Accelerator™ MBSE Methodology Training Course

Objectives

- Become a model-based systems engineering (MBSE) advocate, capable of articulating to organizational decision makers the roots of the return on investment (ROI) from practicing MBSE
- Apply a modeling method, OOSEM (INCOSE's Object-Oriented Systems Engineering Method), to create a behavioral and structural model of a system of interest in a standardized modeling language, SysML (OMG's Systems Modeling Language), using a dedicated SysML modeling tool, Dassault Systèmes' Cameo Systems Modeler (or equivalent modeling tools, e.g. Magic Cyber Systems Engineer—see list of equivalent tools, below)

Duration

- 28 hours (7 hours per day for 4 consecutive days)

Training materials (provided by downloadable zip file in the Delligatti Associates Learning Center):

- Training course handbook
- SysML model of the OOSEM modeling method
- System model template
- CSV file: "DellSat-77 Satellite System Requirements"
- SysML models of the DellSat-77 Satellite System (for each course activity)

Training materials/equipment (provided by Client):

- Computer with high-speed internet connection for each participant. Course delivery is via Microsoft Teams, which must be launched from within the Delligatti Associates Learning Center learning management system (LMS).
- Participant computers must also be loaded with Cameo Systems Modeler Version 2021x Enterprise Edition or an acceptable alternative. The following is a list of products suitable for use in the OOSEM Accelerator™ MBSE Methodology Training Course:

(Legacy)No Magic Products

- Cameo Systems Modeler Enterprise Edition
- Cameo Systems Modeler Architect Edition plus Simulation Toolkit plugin
- Cameo Enterprise Architecture plus Simulation Toolkit plugin
- MagicDraw plus SysML, Requirements Modeler, and Simulation Toolkit plugins

(New)Dassault Systemés CATIA Magic Products

- Magic Cyber Systems Engineer plus Magic Model Analyst plugin
- Magic System of Systems Architect plus Magic Model Analyst plugin
- Participants may submit a software download request to Dassault Systèmes no later than 1 week prior to the class start date. Delligatti Associates will provide a license key to activate and use the software during the 4 days of this course.
- **Participants must attend a modeling tool installation readiness meeting the Friday before their scheduled class where an instructor will verify the software is properly installed and provide a license to activate the software. (Note: the day of this meeting is subject to change based on instructor availability.)**
- Participants should attend the training as well as the modeling tool installation readiness meeting from home—organizational IT network firewalls block access to servers required for these sessions.

Scope of Coverage

| Activity | Topic | Approx. Duration |
|----------|---|------------------|
| 0 | Housekeeping and tool setup | 30 min. |
| 1 & 2 | Introduction and “MBSE with SysML” Overview Presentation | 1 hr. |
| 3 | Object-Oriented Systems Engineering Method (OOSEM) Overview | 30 min. |
| 4 | Organize the Model | 45 min. |
| 5 | Identify Project Stakeholders | 1 hr. 15 min. |
| 6 | Specify Mission Requirements (Stakeholder Concerns) | 1 hr. 15 min. |
| 7 | Define Enterprise Use Cases | 1 hr. |
| 8 | Define To-Be Domain BDDs | 1 hr. 15 min. |
| 9 | Define Mission Scenarios (Use Case Narratives) | 7 hr. |
| 10 | Capture Critical System Properties and Constraints | 1 hr. 30 min. |
| 11 | Define System Context | 1 hr. 45 min. |
| 12 | Specify Black-Box System Requirements | 1 hr. 45 min. |
| 13 | Define System State Machine | 2 hr. |
| 14 | Define Logical Decomposition | 1 hr. 45 min. |
| 15 | Define Interaction Between Logical Components | 1 hr. 15 min. |
| 16 | Define System Logical Architecture IBD | 4 hr. |

Note: a lunch break of approximately 1 hour will be provided each day.

Topics covered:

- The roots of the return-on-investment from practicing MBSE – with supporting data
- The design activities in the Object-Oriented Systems Engineering Method (OOSEM) modeling methodology
- Creating an effective model structure for partitioning design elements and representing that model structure on SysML package diagrams
- Capturing stakeholders and their concerns in a SysML model
- Modeling system use cases and actors with SysML use case diagrams
- Creating SysML activity diagrams to graphically represent system use case specifications
- Creating a structural model of a system’s domain and representing it on SysML block definition diagrams (BDDs) and internal block diagrams (IBDs)
- Modeling system requirements and traceability relationships with SysML requirements diagrams, matrices, and tables
- Creating a structural model of a system’s architecture and representing it on SysML BDDs and IBDs
- Creating a behavioral model of the system via decomposition of use case level behaviors
- Allocating system behaviors to system structures
- Modeling interfaces and object flow in dynamic and static views of the system
- Creating SysML state machine diagrams to represent the state-based behavior of system structures
- The mechanics of operating the Cameo Systems Modeler SysML modeling tool to create and simulate a system model

Cost

| Item | Rate |
|---|---|
| Live Online OOSEM Accelerator™ MBSE Methodology Training Course | <p>\$1,550 per participant</p> <p>(For groups of 10 or more, you may request any open week on our training calendar. The reserved week will become available for open enrollment to fill the class to a capacity of 30 participants.) *</p> |
| On-Demand OOSEM Accelerator™ MBSE Methodology Training Course Subscription ** | Included in the rate for the live online course |

* This is not a private class. Private classes are available by request for the cost of no less than 30 participant seats.

** All participants in the live online version of the course will additionally have a one-year subscription to the on-demand online version of this course to serve as a reviewable learning resource after the live course ends.

Payment Terms

- Individual seats can be purchased via credit card in our [online store](https://ei194.infusionsoft.app/app/storeFront/showCategoryPage?categoryId=4) (<https://ei194.infusionsoft.app/app/storeFront/showCategoryPage?categoryId=4>).
- For purchases made by purchase order outside of the online store, Delligatti Associates will electronically submit one invoice per live online course offering to the Client. The Client will pay the invoice at the standard rate quoted above within 30 calendar days of the end date of the respective course offering. Client will remit payment on each invoice either by credit card or via ACH electronic funds transfer (EFT).

Course Completion Certificate

- At the conclusion of the course, participants will receive a course completion certificate. This certificate supports Professional Development Units (PDU) claims for technical (re-)certifications.

Terms and Conditions of Service

- 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.
- To complete the registration process, each participant must redeem an access code in the Delligatti Associates Learning Center learning management system (LMS).
- Access codes are valid for one (1) year from the date they are provided to the client POC. Once a learner redeems an access code, they will see their scheduled training sessions in the Delligatti Associates Learning Center. Learners will need to launch each daily session from within the LMS at the appropriate date and time for the scheduled course according to the enrollment instructions email which they should receive within 24 hours of redeeming their access code.
- Access to the downloadable training materials as well as the On-demand OOSEM Accelerator™ MBSE Methodology Training Course will be provided to learners one week before the start of their scheduled live online class. Access to the on-demand course will end at 11:59 PM, one year from the date access is provided. No extensions will be granted.
- Access codes for the On-demand OOSEM Accelerator™ MBSE Methodology Training Course cannot be traded for access codes for the On-demand OCSMP Accelerator™ SysML Training Course and vice versa.
- 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

- Delligatti Associates training content is copyright protected. Sharing, downloading, reproduction, screen capture, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or likewise of training content is strictly prohibited without explicit permission from Delligatti Associates, LLC. Learners must agree to these terms of use upon launching and prior to viewing content in the Delligatti Associates Learning Center learning management system.
- 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.

Refund, Rescheduling, and Cancellation Policy

- A refund for a purchased seat may be requested by email to da@delligattiassociates.com **no later than 14 calendar days prior to the training start date.**
- In the event a registered participant is unable to attend the class during the scheduled week, the participant may request to be moved to a future class or a participant substitution may be made provided an email request is sent to da@delligattiassociates.com **no later than 14 calendar days prior to the training start date.** No changes to course enrollment will be permitted thereafter.
- If a minimum capacity of ten (10) participants is not met for a scheduled class, Delligatti Associates may cancel that class.
- Delligatti Associates reserves the right to cancel a scheduled class for extenuating circumstances, including but not limited to instructor illness, power or internet outages, and force of nature events such as storms, floods, fires, earthquakes, etcetera.
- Delligatti Associates will make best efforts to coordinate with any registered participant(s) of cancelled classes to move the participant(s) into a later scheduled class. If a paid participant finds no acceptable alternative class dates, Delligatti Associates will offer the paid participant a full refund.