

FUNDAMENTALS OF MODEL-BASED SYSTEMS ENGINEERING WITH SysML

Take part in this dynamic, three-day, MBSE seminar.

Participants will gain hands-on experience with SysML—a graphical modeling language that has become standard among MBSE practitioners. During this tutorial, you will be guided through the practice of MBSE which provides both the context and business-case for learning SysML. This course will demystify MBSE, demonstrating its three pillars—a modeling language, a modeling method, and a modeling tool. The course debunks a common myth concerning MBSE, allowing you to better manage customer expectations while still delivering the investment returns MBSE promises.

Prerequisite: Undergraduate degree in a technical field, project management, or equivalent experience. Experience in SysML strongly recommended.

CLASSROOM: November 6 – 8, 2017

Mon – Wed | 8:30 am – 4:30 pm | 21 hrs | \$1095 | 2.1 CEUs

Topics Include:

- The roots of the ROI from practicing MBSE
- The difference between a SysML modeling tool (e.g., Cameo Systems Modeler) and a diagramming tool (e.g., Visio)
- The design possibilities available in the Object-Oriented Systems Engineering Method (OOSEM)
- Creating effective model structure for partitioning design elements and how to represent that structure on SysML package diagrams
- Capturing stakeholders and their concerns in a SysML model
- Using cases and actors with SysML use-case diagrams
- Producing SysML activity diagrams to graphically represent system use-case specifications
- Simulating a system behavior using Cameo Simulation Toolkit
- Building a structural model of a system's domain and portraying it on SysML block definition diagrams (BDDs) and internal block diagrams (IBDs)
- Modelling system requirements and traceability relationships using SysML requirements diagrams and tables
- Generating a structural model of a system's architecture and illustrating it on SysML BDDs and IBDs
- Allocating system behaviors to system structures
- Performing automated impact analysis when a requirement or design element changes
- Operating the Cameo Systems Modeler SysML modeling tool to create a system model

For more information:

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On completion, you will be able to:

Demonstrate the roots of return on investment (ROI) from practicing model-based systems engineering (MBSE) to organizational executives

Use OOSEM™ (INCOSE's Object-Oriented Systems Engineering Method) to create a behavioral and structural model of a system in SysML™ (OMG's Systems Modeling Language), using SysML's dedicated modeling tool—No Magic's Cameo Systems Modeler™

See reverse for instructor bio.



FUNDAMENTALS OF MODEL-BASED SYSTEMS ENGINEERING WITH SYSML

INSTRUCTOR

Loyd Baker, Integrated Thought Corporation (ITC)

Principal Systems Engineer with many years of experience applying various systems engineering processes for different organizations. The last twenty-two years, extensive experience gained in developing and applying Model Based Systems Engineering (MBSE) processes used successfully by many corporations and government agencies such as Lockheed, Boeing, Northrop Grumman, NASA, DoE, and US Army. Additionally, responsible for training customers on how best to use MBSE tools to do requirements management, system architecture modeling, and system design verification. Most recent assignment involved the design and integration of a SysML capability into the Cradle Requirements Management & Systems Engineering Support tool adopted by NASA in 2005. Mr. Baker is a past president of the Huntsville Chapter of International Council on Systems Engineering (INCOSE), and a NASA Silver Snoopy Award winner for support of the Apollo missions.



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