



STUDIO SE

INSPIRE • INFLUENCE • IMPACT

MBSE Courses



MBSE Success, Together



MBSE MASTER CLASS

(48 hours)

You will learn SysML and how it enables deployment of MBSE. You will get more than an academic understanding of the material - you will be able to apply the techniques to your work - immediately.

We show you how to:

- Use MBSE to collect and analyze stakeholder input and feedback.
- Apply MBSE across the product life cycle including, stakeholder research, requirements development, detailed design, risk management, alternative analysis, interface design, and sustaining engineering.
- Manage changes during development and after launch.
- Characterize and design efficient, effective processes.
- Leverage simulation capabilities in SysML to evaluate your designs.

Our MBSE Master Class is delivered over 6 days and gives you the skills you need to correctly deploy the SysML language. We will build models, together, click-by-click, so that you leave the class with the confidence to use your new skills on the job.

MBSE COURSES

PROFILES AND MBSE MANAGEMENT

(16 hours)

Stereotypes and profiles can be powerful tools when used properly. When used incorrectly, they can confound an otherwise effective SysML effort. This course explores how and when to customize the SysML language by exploring metamodels to encourage model consistency and ensure effective communication. Additionally, this session addresses the use of style guides and best practices in model development. This course explores the use of libraries to create reusable elements that can be deployed across projects and use SysML and MBSE methodologies to map corporate processes to identify opportunities for enhancements.

DEPLOYING SYSML IN FRAMEWORKS

(6 hours)

Frameworks are often a central focus of development efforts. While frameworks are well-specified, deploying them can be a challenge. This challenge is compounded when it becomes necessary to deploy SysML in the context of a framework. This course addresses common challenges in both deployment of frameworks and the interoperability of frameworks with SysML.

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DRIVING VALUE

(4 hours)

Many clients and agencies are driving the deployment of MBSE and SysML by requiring its use on project development efforts. What does this mean for the organization? How can the organization effectively communicate the contents of the models to both internal and external stakeholders? How do we extract information from our models in a way that is accessible to our clients? This course explores the answers to these questions and presents a series of best practices coupled with tool capabilities to ensure your customers and your stakeholders see the best possible value from MBSE/SysML.

BUILDING PRODUCT FAMILIES

(4 hours)

Product Lifecycle Engineering presents a series of management challenges. SysML tools present certain capabilities that are useful in managing families of products. This course explores the use of instances to manage variations in product configurations. This course will also address importing data from external sources into the model environment as well as capabilities of DataHub.



MODELING REQUIREMENTS

(6 hours)

Effective requirements are one of the cornerstones of an effective development effort. This course explores methods and mechanisms for modeling requirements and managing requirements relationships in SysML. Often, requirements are managed in spreadsheets or dedicated requirements management tools. This course will explore the import and synchronization capabilities of SysML and how to use custom stereotypes to manage the interface between the SysML model and external requirements repositories.

JUST THE FACTS

(1-4 hours)

Many organizations are interested in MBSE and would like to pursue opportunities to capitalize on the enhancements that MBSE offers. Often, MBSE is presented as an overly-complicated, "all-or-nothing" approach that is perceived as a burden or cumbersome to implement. Our "Just the Facts" seminar clearly and concisely describes the value of MBSE and shows how the methods and tools can be seamlessly integrated into your organization's workflows, processes, and development efforts.

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EVALUATING PERFORMANCE WITH OUR MODELS

(4 hours)

While descriptive models are crucial enablers to good system design, executable models are invaluable in evaluating the expected behavior of our system of interest. Executable models can rely on numerical and statistical analysis techniques like Monte Carlo Simulation as well as deploy algorithms to perform analyses like Fault Tree Analyses. Cameo Simulation Toolkit is a powerful ally in evaluating the cohesiveness of descriptive models and is even more powerful in evaluating executable models. In some cases, it is necessary to deploy an external solver to compute complex scenarios. Additionally, combining requirements and parametrics can enable automated trade studies that effectively identify viable design alternatives. This course explores the use of Cameo Simulation Toolkit to solve mathematical and analytical problems. 3rd party solvers will be deployed to showcase the interoperability of Cameo tools with external software solutions.

MBSE COACHING

As collaborators with your team, Studio SE personnel will be delighted to assist with the following tasks, as necessary and requested:

- 1) review your teams' models, to provide guidance on model-building activities
- 2) identify and facilitate activities to define next steps to help your team realize a successful modeling effort
- 3) coach project teams in the consistent implementation of MBSE/SysML
- 4) help guide project teams in implementing MBSE/SysML in the context of your development processes
- 5) work with your team to develop a corporate MBSE deployment strategy
- 6) guide development of an MBSE process model and corresponding procedure (SOP) development.

About Us



STUDIO SE
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Our Team



Your staff is highly capable and driven, but regulatory and product development landscapes are always changing. We evolve your team's skills to meet the demand of these new environments and prepare them for success - no matter the changes. Our world-class master classes extend across the product development life cycle.

Most trainers simply define the language and leave it up to you to figure out how to actually use it. We approach training differently - we teach you to understand the language, but, more importantly, how to use it in a simple, step-by-step process that drives success.

Casey Medina

FOUNDER AND PRESIDENT

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