Introduction to SysML

Course Background:

SysML is a visual modeling language, derived from the UML, particularly intended for the model based development of software intensive systems. The SysML system modeling language is specified and developed by the OMG (Object Management Group) and is supported by INCOSE (International council for System Engineering). The modeling language particularly enables the systematic application and documentation of design logic. There are four main drivers for the SysML. First, it attempts to provide an integral approach for all engineering disciplines by offering a modeling language that can visualize different engineering aspects in a coherent and consistent manner. Second, it offers modeling of requirements and it helps to systematically account for these requirements through the various system design choices. Third, it offers model based rather than document based development. Last, but not least, it supports the co-design of software versus mechanical and electrical engineering aspects of a system. SysML currently draws much attention in domains like automotive, infrastructure development and command and control systems.

This one day introductory course intends to provide an overview of the various modeling techniques that comprise the SysML using simple examples from the automotive and infrastructure domains. Particular attention is paid to modeling software in conjunction with mechanical and electrical engineering aspects. Simple examples.

Course Benefits:

After completion of the course, participants will:

- have basic knowledge of the various diagramming techniques.
- understand and appreciate the added value of the use of SysML and
- understand the position of SysML compared to other modeling techniques.

Who will benefit from this course?

- Software and system engineers involved in the development of complex software intensive system

Teaching method:

Lectures, examples and guided discussions.
Teaching material: Copies of presentations, text of cases, articles, books (if desired)
Language: English or Dutch

Contents:

1. Introduction to SysML
2. Modeling requirements.
3. Setting up a project.
4. Modeling system structure with SysML:
   4.1. making Block Definition Diagrams and Internal Block Diagrams
5. Modeling system behavior with SysML:
   5.1. state machines and sequence diagrams
6. Modeling system constraints and performing trade studies with SysML:
   6.1. modeling with Parametric Diagrams
7. Modeling behavior with activity diagrams
8. Modeling software versus hardware aspects of a system.

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Our Trainer

Our trainer is Advanced OMG Certified Systems Modeling Professional (OCSMP).

Mithun , influencing member of the OMG, is content developer for the OCSMP program.

Additional Options:

In order to further enhance the outcome of this course, so the course will better meet your specific requirements, please indicate any desired options when discussing this course, or contact your account manager.

Complementary Courses:

The course curriculum offered by Mithun includes:

Requirements Engineering basics	Requirements Management Foundations
	RM&E Aware for Managers
Requirements Engineering advanced	The Risk of Words – Writing and Documenting Requirements
	Interviewing Techniques & Guidelines
	Elicitation Workshop Techniques & Guidelines
Scrum	Applying Scrum
Object Oriented Analysis & Design	Object Oriented Analysis & Design using UML 2.x
	Design Patterns and Emerging Architecture
	Realizing Software Architectures with UML 2.x
	Specification of Component Interfaces
	API Design
Model Based Systems Engineering	Systems Modeling with SysML
	Introduction to SysML
Real-time & Embedded Analysis & Design	Real-time Software Design
	Advanced Real-Time Analysis & Design
OMG Programs	OMG Certified UMP Professional
	Preparation training OCRES Intermediate Certification

Terms and conditions:

The standard terms and conditions of Mithun Training & Consulting will be sent on request.

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