Course : SysML for Systems Modeling

Practical course - 2d - 14h00 - Ref. SML
Price : 1500 CHF E.T.

A COMPLETER

Prerequisites

Learners should have a first experience in system engineering.
Basic knowledge of UML is a plus.

Course schedule

1 Introduction

- SysML Objectives and Origins - Systems Engineering (SE). - UML2 and SE? - SysML Objectives. - SysML History.
- SysML Diagrams - SysML= UML2 Profile. - UML2 Diagrams. - SysML Diagrams.
- Proposed Approach - Case Studies. - Modeling Approach.

2 Requirements Modeling

- Use Case Diagram - Use Case. - Actor. - Scenario. - Relationship between Use Cases.
- Sequence Diagram - Interactions, messages. - System Sequence Diagram. - Combined Fragment. - Reference. Timing Cons
- Requirement Diagram - Requirements. - Relationship between Requirements.

3 Structural Modeling

- Block Definition Diagram - Block. - Value Type. - Part, Composition. - Aggregation, Association. - Generalization.
- Internal Block Diagram - Connector. - Port. - Interface - ibd Example
- Package Diagram - Package. - Relationship between Packages. - View and Viewpoint.

4 Dynamic Modeling

- State Diagram - State, Event, Transition. - Condition, Effect, Activity. - Composite State. - Concurrent Regions.
- Activity Diagram - Action, Flow. - Fork, Join. - Object Node. - Activity Call. - SysML extensions

PARTICIPANTS

PREREQUISITES

Learners should have a first experience in system engineering. Basic knowledge of UML is a plus.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

5 Transverse Modeling

- Parametric Diagram - Constraint. - Value Binding. - SE trade-offs
- Allocation Concept - Allocation types. - Allocation Representations.
- Requirement Diagram and Traceability - Traceability. - Relationship with Requirements.

6 Conclusion

- The Four Pillars of SysML - 9 diagrams. - Links between them.
- SysML Tools
- Resources

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

Dates and locations

REMOTE CLASS

2026 : 29 June, 29 June, 16 Nov., 16 Nov.