Publication date : 01/05/2024

# Course : Data modelling for project management

*Practical course - 2d - 14h00 - Ref. MDO*
*Price : 1540 CHF E.T.*

4,6 / 5

## Teaching objectives

**At the end of the training, the participant will be able to:**

- Develop and describe system data
- Develop a UML class diagram from a dictionary
- Check the normality of a model
- Understand how to move from a semantic model to a logical model

## Course schedule

### 1 Introduction

- The role of data in the IS.
- Overview of modeling techniques and methods.

### 2 Data Dictionary

- Data search.
- Sources: Review of existing applications, management documents, strategic choices of the company.
- Data description: Naming rules, definition rules. Documenting existing systems.

**Hands-on work**
Writing a data dictionary.

**PARTICIPANTS**

**PREREQUISITES**

**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.

## 3 Semantic data modeling

- How to define data independently of the logical and physical infrastructure.
- Data modeling levels: Specification level; design specification level.
- Approaching this problem with UML. The UML class diagram. Classes, attributes, objects, associations, constraints.
- How can the same problem be handled with another formalism? The entity-relationship diagram.
- Standardization. How do normal forms help to understand the data?
- The role of data in the description of business and oversight processes.
- Get users involved in data modeling. Validation.
- Addressing data in the context of detailed specification validation.

### Hands-on work

Develop a UML class diagram from a dictionary Transform the created model into an entity-relationship model. Check the normality of the previous models.

## 4 Logical data modeling

- The stages of model transformation.
- The rules for moving from a semantic (conceptual) model to a logical model.
- The passage from a logical model to the physical model, the optimization work.
- Project manager's participation in the optimization work.

### Hands-on work

Turning a model into a logic model.

## 5 Modeling tools

- Presentation of a UML tool (StarUML and/or PowerAMC).
- Presentation of an entity-relationship tool (PowerDesigner "MCD version").

**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 : 4 June, 4 June, 17 Sep., 17 Sep., 26 Nov., 26 Nov.