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# Object Oriented Analysis and Design – Advanced

## Description

This course allows participants to know the key concepts and methodologies required to perform quality object-oriented software engineering, with particular attention to practical techniques such as use-case, UML diagramming, and patterns.

### Niveau

Avancé

### Course Content

#### Module 1: Identify Design Elements

- Lesson 1: Identify classes and subsystems
- Lesson 2: Identify subsystem interfaces
- Lesson 3: Update the organization of the Design Model

#### Module 2: Identify Design Mechanisms

- Lesson 1: Categorize clients of analysis mechanisms
- Lesson 2: Document architectural mechanisms

#### Module 3: Distribution

- Lesson 1: Define the network configuration
- Lesson 2: Allocate processes to nodes
- Lesson 3: Define the distribution mechanism

#### Module 4: Use Case Design

- Lesson 1: Describe interaction among design objects
- Lesson 2: Simplify sequence diagrams using subsystems
- Lesson 3: Describe persistence-related behavior
- Lesson 4: Refine the flow of events description
- Lesson 5: Unify classes and subsystems

#### Module 5: Subsystem Design

- Lesson 1: Distribute subsystem behavior to subsystem elements
- Lesson 2: Document subsystem elements
- Lesson 3: Describe subsystem dependencies

#### Module 6: Class Design

- Lesson 1: Create Initial Design Classes
- Lesson 2: Define Operations
- Lesson 3: Define Methods
- Lesson 4: Define States
- Lesson 5: Define Attributes
- Lesson 6: Define Dependencies
- Lesson 7: Define Associations
- Lesson 8: Define Internal Structure

- Lesson 9: Define Generalizations
- Lesson 10: Resolve Use-Case Collisions
- Lesson 11: Handle Nonfunctional Requirements in General

### **Lab / Exercises**

- During the course participants are encouraged to actively participate in the learning experience by running example files during lectures and performing design challenges during labs. Each lab session allows you to compare your solution to the instructor's

### **Documentation**

- Digital courseware included

### **Participant profiles**

- Any professional who needs to design object-oriented software solutions

### **Prerequisites**

- Having followed the course [Object Oriented Analysis & Design - Fundamentals](#)

### **Objectives**

- Use an efficient method for IT design
- Use iterative, Use Case and architecture centric model
- Use UML to represent the model
- Use objects paradigms (abstraction, encapsulation, inheritance, ...)

### **Classroom Registration Price (CHF)**

1600

### **Virtual Classroom Registration Price (CHF)**

1500

### **Duration (in Days)**

2

### **Reference**

OOAD-02