

# Object-oriented concepts in Java – Basics («JAVA02»)

Learn the basic object-oriented concepts of the Java programming language in this course. You will get an overview of their versatile applications.

**Duration:** 2 days

**Price:** 1'350.–

**Course documents:** Digicomp Courseware

## Content

1. Terms
  - What are objects?
  - What are attributes?
  - What are operations?
  - What are classes?
  - What are messages?
2. Classes
  - Modelling
  - Declaration
  - Cohesion
3. Objects
  - Instantiation
  - Reference
4. Fields
  - Non-static fields
  - Access
5. Memory usage
  - Stack and Heap
  - Allocation
6. Aggregation
  - Modelling
  - Coupling
7. Methods
  - Non-static methods
  - Invocation
8. Parameters and Arguments
  - Value transfer
  - Variadic methods
9. Encapsulation
  - Plausibility check
  - Processors and Mutators
10. Overshadow
  - Overshadowed fields
  - Self-reference for fields
11. Constructors
  - Default
  - Initialization
12. Overloading
  - Overloaded methods
  - Overloaded constructors
  - Horizontal constructor chaining
13. Static

- Static fields
- Static Methods
- Static Imports

#### 14. Initializer

- Static initializers
- Non-static initializers

#### 15. Memory release

- Garbage collection
- Null reference

## Key Learnings

After attending this part of the course, you will be familiar with the basic object-oriented concepts of the Java programming language.

## Target audience

This course is aimed at programmers who already know the syntactic basic concepts of the Java programming language and now want to learn the basics of their object-oriented concepts.

## Requirements

- [Fundamental Language Elements of Java \(«JAVA01»\)](#)
- [Basics of Object-oriented Software Development \(«OGL»\)](#)

## Further courses

- [Object-Oriented Concepts in Java – Advanced \(«JAVA03»\)](#)

## Any questions?

We are happy to advise you on +41 44 447 21 21 or [info@digicomp.ch](mailto:info@digicomp.ch). You can find detailed information about dates on [www.digicomp.ch/courses-software-engineering/programming-languages/java-javascript/course-object-oriented-concepts-in-java-basics](http://www.digicomp.ch/courses-software-engineering/programming-languages/java-javascript/course-object-oriented-concepts-in-java-basics)