GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2020-2021

Object-Oriented Programming (F000887)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course size *(nominal values; actual values may depend on programme)*

Credits 3.0 **Study time 90 h** **Contact hrs** 30.0 h

Course offerings and teaching methods in academic year 2020-2021

A (semester 1)	Dutch	Gent	online lecture	15.0 h
			online seminar: coached exercises	3.75 h
			online lecture: plenary exercises	7.5 h
			seminar: practical PC room classes	3.75 h

Lecturers in academic year 2020-2021

Gailly, Frederik	EB24	lecturer-in-charge

Offered in the following programmes in 2020-2021	**crdts**	**offering**
Bachelor of Science in Business Engineering	3	A
Bachelor of Science in Business Economics	3	A

Teaching languages

Dutch, English

Keywords

Java, principles of programming, object-oriented programming, program implementation

Position of the course

In this course students get acquainted with the development of software applications.
The focus is on studying an object-oriented programming language
Java. Simultaneously the students learn the basic principles of object orientation.

Contents

1 Introduction to programming with Java
2 Basic Computation with Java
3 Flow of control: branching
4 Flow of control: Loops
5 Defining Classes and Methods
6 Arrays
7 Inheritance, Polymorphism and interfaces
8 GUI: Applets, Frames, Buttons and Events

Initial competences

Demonstrate knowledge of fundamentals of computer science and information and communication technologies and being able to apply this knowledge.

Final competences

1 Be able to read and understand a Java program
2 Know the principles of object orientation
3 Given a program design, be able to develop a correct java implementation

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

Access to this course unit via an exam contract is unrestricted

Teaching methods

Seminar: practical PC room classes, online lecture, online lecture: plenary exercises, online seminar: coached exercises

Extra information on the teaching methods

Lecture:
During the lecture the Java syntax and semantics are explained and at the same time the principles of objectorientation are introduced.
Demonstration:
Video tutorials are available online which demonstrate the use of Java for solving small business problems.
seminar: practical PC room classes:
Every three weeks a set of small programming exercises need to be solved using the UGent Dodona online platform. The students need to prepare the exercises on a PC and afterwards the dodona platfom can be used to receive feedback.

Learning materials and price

- Java: An Introduction to Problem Solving and Programming, 7/E Walter Savitch
- Study material available via Ufora
- Screencasts with demo programs
- dodona.ugent.be

References

Course content-related study coaching

- dodona.ugent.be
- ufora.ugent.be

Evaluation methods

end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Written examination with open questions, written examination with multiple choice questions

Examination methods in case of periodic evaluation during the second examination period

Written examination with open questions, written examination with multiple choice questions

Examination methods in case of permanent evaluation

Assignment

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible

Extra information on the examination methods

Dodona assignments:
2 points can be earned based on the correctly execution of the dodona assignments
Closed book Exam on PC.
The first part of the exam consists of a multiple choice exam which evaluates if the students understands the java syntax and semantics. The second part focuses on the development of a Java implementation.

Calculation of the examination mark

- Closed book exam: 90% (45% multiple choice + 45% java project)
- Dodona assignments:10%