Object Oriented Programming and Java

Single subject and programme course

6 credits

Objektorienterad programmering och Java

729A85

Valid from:

Determined by
The Quality Board at the Faculty of Arts
and Sciences

Date determined
2015-04-07

Offered for the last time
Spring semester 2022

Main field of study

Cognitive Science

Course level

Second cycle

Advancement level

A1X

Course offered for

- Master Programme in Cognitive Science

Entry requirements

Basic knowledge in programming. Practical programming experience in some language, e.g. Python or Lisp.

Intended learning outcomes

After the course, the student will be able to:
Explain and apply basic concepts of object oriented programming, e.g. classes, instances, messages, methods and polymorphism.
Understand and draw class diagrams using the UML standard.
Describe and apply basic design patterns.
Implement object oriented programs in Java.

Course content

Object oriented programming concepts, such as classes, instances, messages, methods, polymorphism, instance variables and inheritance.
Design principles and design patterns, specially the use of polymorphism and inheritance vs. delegation.
Class diagrams in UML.
The Java programming language and the most important class libraries, including programming of simple graphical user interfaces.

Teaching and working methods

The course consists of laboratory assignments and a programming project.

Examination

Oral and written demonstration of code.

Grades

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Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus. The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

Department

Institutionen för datavetenskap