Object Oriented Programming and Java

Single subject and programme course

6 credits

Objektorienterad programmering och Java

729A85

Valid from: 2015 Spring semester

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

Date determined
2015-04-07

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.

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it. If the coordinator has instead recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

Three-grade scale, U, G, VG

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