

# Object Oriented Programming and Java

Programme course

7 credits

Objektorienterad programmering och Java

TDDE30

Valid from: 2018 Spring semester

**Determined by** Board of Studies for Computer Science and Media Technology

**Date determined** 

# Main field of study

Computer Science and Engineering, Computer Science

## Course level

First cycle

## Advancement level

C<sub>1</sub>E

### Course offered for

• Computer Science and Engineering, M Sc in Engineering

## **Entry requirements**

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

# **Prerequisites**

Basic knowledge in programming. Practical programming experience in Python, corresponding to (for example) the course Functional and Imperative Programming part 1 and part 2.

# 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..xxx
- Understand and draw class diagrams using the UML standard.
- XXX
- $\bullet$  Implement object oriented programs in Java.
- XXX



## Course content

XXX

- 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**

UPG1	Written assignment	1 credits	U, G
LAB1	Laboratory work	3 credits	U, G
PRA1	Project assignment	3 credits	U, 3, 4, 5

## Grades

Four-grade scale, LiU, U, 3, 4, 5

# Department

Institutionen för datavetenskap

# Director of Studies or equivalent

**Peter Dalenius** 

### **Examiner**

Jonas Kvarnström

## **Education components**

Preliminary scheduled hours: 66 h Recommended self-study hours: 121 h



# Course literature

#### Other

A book about Java och object oriented programming. To be announced before course start.

Lecture notes and othe material will be available online.

