



Course syllabus

Faculty of Technology

Department of Computer Science and Media Technology

1DV607 Objektorienterad analys och design med UML, 7,5
högskolepoäng

Object Oriented Analysis and Design using UML, 7.5 credits

Main field of study

Computer Science

Subject Group

Informatics/Computer and Systems Sciences

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved 2014-10-03

Revised 2017-01-19 by Faculty of Technology. Prerequisites are revised.

The course syllabus is valid from autumn semester 2017

Prerequisites

30 credits in the subjects of Computer Science, Computer Technology or Informatics including 1DV024 Object-Oriented Programming, 7.5 credits or 1DV506 Problem Solving and Programming, 7.5 credits or equivalent.

Objectives

The course gives basic knowledge in object-oriented analysis and design, the basics of the modeling language UML and the implementation of analysis and design models using an object-oriented programming language.

After completing the course the student is expected to:

- Understand the concepts and principles of object-oriented analysis and design
- Be able to develop object-oriented models in UML for different problems
- Be able to transform object-oriented models into an object-oriented programming language and vice versa
- Have basic knowledge of the use of design patterns
- Have basic knowledge of refactoring as a design method.

Content

The theory provides the fundamental principles, which are used as the basis for the creation of self-knowledge, which is then used in practical applications.

Course elements:

- Principles and methods for object-oriented analysis and domain modeling in UML
- Principles and methods for object-oriented design in UML
- Principles and methods of use of design patterns
- Transformation of object-oriented design to object-oriented implementation and vice versa
- Principles and methods for refactoring of object-oriented implementation method of object-oriented design

Type of Instruction

The course is available on campus or as a distance course. Instruction consists of theory and work on practical applications and tutorials.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Grades are given after the completion of the course and based on the results of assignments. The assignments judged based on quality, scope and degree of difficulty.

Reexamination will be offered within six weeks under the regular semester periods. The number of examinations is limited to five times.

Course Evaluation

A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

Credit Overlap

This course cannot be part of a degree in combination with another course in which the content fully or partly correspond to the content of this course: 1DV407 Object Oriented Analysis and Design using UML, 7.5 credits

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Required Reading

Larman, *C Applying UML and Patterns, 3rd edition*, Prentice Hall, latest edition