



Course syllabus

Faculty Board of Science and Engineering

School of Computer Science, Physics and Mathematics

1DV102 Programvaruteknik – Processer, 15 högskolepoäng

1DV102 Software Engineering – Processes, 15 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 by Organisational Committee 2009-12-01

The course syllabus is valid from autumn semester 2010

Prerequisites

Problem Solving and Programming 7.5 credits (1DV006) and Programming and Data Structures 7.5 credits (1DV007) or equivalent.

Objectives

Upon completion of the course, the student should be able to:

- describe and explain concepts and principles of object oriented software development
- describe and explain fundamental theories, techniques and methods in software engineering
- master advanced object oriented modelling principles and techniques
- individually, or in teams, perform specific software development tasks for collecting and analysing requirements, develop and evaluate a design, and test and document an implementation.
- individually, or in teams, perform a software development project using object oriented technology

Content

The course covers:

- modeling in UML
- software engineering processes
- project, planning and control of project execution
- basic principles of software reuse and maintenance
- requirements engineering
- object oriented analysis
- object oriented design
- design patterns
- software testing

Type of Instruction

Teaching consists of lectures, seminars and practicals. The course also includes a software development project. Practicals are carried out individually or in groups. Attendance at some activities is mandatory.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

Assessment of the students performance is made through written or oral tests and/or the presentation of compulsory practical assignments. The types of assessment used will be decided upon, at the beginning of the course.

Students who do not pass the regular examination are given the opportunity to do a resit examination shortly after the regular examination.

Course Evaluation

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

Other

Upon request, a Swedish University course certificate will be awarded upon successful completion of the course.

Students who receive a passing grade in the course may download a course certificate through the Student Portal. Otherwise they may request a course certificate from the school secretary.

Required Reading and Additional Study Material

Required reading

Sommerville, I, *Software Engineering 8th Ed.* Addison-Wesley, (2007). Pages 600 (800).

Booch, G, *Object-Oriented Analysis and Design with Applications, 3rd Ed.* (2007). Pages 500 (720).