



DD1342 Program Construction

6.0 credits

Programkonstruktion

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for DD1342 valid from Autumn 2008

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After completing this course the students will be able to

- * Write small imperative programs.
- * Use control structures and functions.
- * Design and implement simple graphic interfaces.
- * Explain the ADT notion and exemplify its usability.
- * Use ADT:s to solve given programming problems.
- * Describe the MVC model for program structuring and how it can be extended to program a physical simulation.
- * Use the extended MVC model to write a program for a given physical simulation or animation.
- * Describe basic concepts in object oriented programming: class, object, interface, reference and inheritance.
- * For a given programming task, implement a well modularized program where objects are used both as modules and as data.
- * Understand and use program documentation.
- * Discuss programming using computer science terms.

grades C, D and E will be based on the degree of achievement of the learning outcomes above.

For grades A and B:

- * Choose a problem and design and implement a modularized program, individually (for grade A) or together with another student (grade B).

For grade A:

- * Write documentation of how to use the program and its modules.
- * Write documentation of the construction process for the program.

and therefore they can

- * effectively use computers in their studies and working life,
- * take other courses in computer science and numerical analysis.

Course contents

The basics of a modern programming language. The programming language used is Java.

Computer science concepts.

Modularization and program structuring.

Applications in modelling and simulation.

Course literature

To be announced at least 2 weeks before the course start at the web page for the course.

Examination

- LAB1 - Laboratory Assignments, 6.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

Laboratory assignments (LAB1; 6 university credits).

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.