



ML1303 Programming, general course 6.0 credits

Programmering, allmän kurs

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

Establishment

Course syllabus for ML1303 valid from Autumn 2012

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Knowledge corresponding to admission requirements for Bachelor of Science in Engineering
Basic computer skills

Language of instruction

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

Intended learning outcomes

Aims:

The course will provide the basic knowledge of a modern programming language.

In order to obtain satisfactory marks, the student must be able to write structured programs in a given programming language, with particular emphasis upon:

- Formulating elementary algorithms for given problems and converting them into a program code
- Using an Integrated Development Environment to write, execute, and debug a program.
- Introducing and using data types and variables for storing data (including complex data types)
- Explaining memory management of various data types, and distinguishing between addresses and variable values.
- Conducting simplistic program design while choosing appropriate test data (i.e. breaking down a problem into partial problems, implementing functions one at a time, and performing step-by step testing).
- Using external files for data storage.

In order to obtain higher marks, the student must be able to analyze more complex programming tasks and structure solutions on several levels: including problem analysis, comprehensive design, well-designed user interfaces, subdivision into partial problems, modules and functions, and implementation.

Course contents

- Background and introduction to programming languages
- Data types, variables, and references
- Operators
- Sequence, selection, and repetition
- One and multi-dimensional arrays
- Functions and modular programming
- Problem analysis, structuring, debugging, and testing
- Memory management
- Text management
- File management

Course literature

Meddelas 2 veckor innan kursstart.

Examination

- ÖVN1 - Exercise, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written Exam, 1.5 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.

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

Other requirements for final grade

Passed written exams

Passed lab assignments. The final grade is based on all parts of the examination.

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.