



ML1602 Computer Programming, Basic Course 7.5 credits

Grundläggande programmering, grundkurs

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

Establishment

Course syllabus for ML1602 valid from Autumn 2017

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

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

- formulate simple algorithms for given problems and transfer these to program code
- use Matlab development environment to write, execute and troubleshoot various types of programmes
- use different data types and variables, including composite variables, for storing data
- carry out simple program design, i.e. deconstruct problems in partial problems, implement and test functions step by step, with use of appropriate test data
- handle external files for data storage
- use Matlab for technical calculations with applications in statistics and mechanics
- formulate SQL queries for relational databases

Course contents

- Introduction to the structure and function of a computer, both from a hardware and a software perspective.
- Basic computer science concepts and program structures (variables, data types, matrices, cells, references, loops, functions, modules, etc)
- Problem analysis, structuring, troubleshooting and testing
- File management
- Text handling
- Matlab programming- import of data, functions, diagrams
- Introduction to relational databases
- Formulation of SQL queries
- Application of Matlab for problems in mathematics, mechanics and statistics

Course literature

Meddelas vid kursens start.

Examination

- PRO1 - Project, 1.0 credits, grading scale: P, F
- KON2 - Partial exam 2, 1.5 credits, grading scale: P, F
- KON1 - Partial exam 1, 1.0 credits, grading scale: P, F
- LAB1 - Laboratory work, 4.0 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.

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

Other requirements for final grade

Partial exam 1

Partial exam 2

Laboratory work

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.