ML1309 Programming and Numerical Tools 6.0 credits

Programmering och numeriska verktyg

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

Establishment

Course syllabus for ML1309 valid from Spring 2020

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Approved module TENA in ML1000 or equivalent

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:

- write programs in MATLAB, which includes definition and handling of functions, numbers, matrices and structures
- handle information, which has been stored in files and structures
- solve numerical problems

Course contents

Programming:

- Background and introduction to programming languages
- Data types
- Variables of one and several dimensions and structures
- Plotting graphs
- Loops and conditional statements
- Linear equation systems
- Functions and scripts
- Error search
- Text handling
- File handling

Numerical tools:

- Numerical integration
- Numerical solution of equations
- Numerical solution of ordinary differential equations

Examination

- TEN1 - Written examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- DÖV1 - Computer exercises, 3.0 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.

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.