BB1000 Programming in Python 7.5 credits

Programmering i Python

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

Establishment

Course syllabus for BB1000 valid from Spring 2017

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

The upper-secondary school before 1 July 2011 and adult education at upper-secondary level before 1 July 2012

Specific entry requirements: mathematics E, physics B and chemistry A. In each of the subjects the grade required is Passed or 3.

The upper-secondary school from 1 July 2011 and adult education at upper-secondary level from 1 July 2012 (Gy2011)

Specific entry requirements: Physics 2, Chemistry 1 and Mathematics 4. In each of the subjects the minimum grade required is Pass.

Language of instruction

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

Intended learning outcomes

As a result of attending and passing the course a student will be able to

• Write well-structured modular programs in Python

• Write programs that fulfil community standards

• Use test-driven development principles for programming.

• Use modern version control for program development in teams.

• Use external libraries in their programs.

• Work with files: read, write and analyze data

• Analyze programs by debugging, profiling and optimization.

Course contents

• Basic syntax in Python, data structures and program flow.

• Structuring of programs with functions and modules

• Version control with git

• Object-oriented programming with classes

• Methods of testing for Python development

• Python libraries for computation and plotting

• Advanced structures and concepts in Python.

Course literature

* Lecture slides and lab material.

* A list of optional recommended literature is given at the start of the course.

Examination

• TEN1 - Written Exam, 3.0 credits, grading scale: A, B, C, D, E, FX, F

• LAB1 - Laboratory Work, 4.5 credits, grading scale: P, 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 Computer labs and Written 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.