DD2397 Applied Bioinformatics 7.5 credits

Tillämpad bioinformatik

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 DD2397 valid from Autumn 2009

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Biotechnology,Computer Science and Engineering

Language of instruction

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

Intended learning outcomes

Bioinformatics has become an important tool for handling and utilizing the large sets of valuable data produced in Molecular Biology. Computerized analysis has a role both as support for wet-lab projects and as a means of extracting knowledge from already available datasets. The fast-growing amount of data makes it necessary to be able to automate analysis and make analysis on a very large scale. This course aims to introduce techniques for meeting this challenge.

Course contents

After completion of this course, you will be able to

- structure data for efficient computerized storage and analysis
- use relational databases
- create your own relational databases
- use a scripting language to solve every-day problems in Bioinformatics
- use important Bioinformatic software libraries to quickly find solutions for tedious programming problems.

The subjects we study have applications in many areas, not just Bioinformatics and Molecular Biology, but these are the fields from which examples and exercises will be taken.

Specific prerequisites

Single course students: 90 university credits including 45 university credits in Mathematics or Information Technology. English B, or equivalent.

Course literature

The course literature will be announced at the home page for the course at least 4 weeks before course start.

Examination

- LAB1 - Laboratory Work, 4.5 credits, grading scale: P, F
- PRO1 - Project, 3.0 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.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

Other requirements for final grade

Computer lab (LAB1, 4,5 university credits)
Project (PRO1, 3 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.