DD2399 Omic Data and Systems Biology 7.5 credits

Omikdata och systembiologi

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

Establishment

Grading scale

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

Education cycle

Second cycle

Main field of study

Biotechnology, Computer Science and Engineering

Specific prerequisites

Language of instruction

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

Intended learning outcomes

The students should after the course

- be able to discuss modern high-throughput methods with biologists,
- know current public databases well enough to be able to evaluate the feasibility of a project,
- be able to use popular tools for analysis of omics data as wells as explain and discuss the relative benefits of these,
- be able to give intuitive descriptions of algorithms and methods for analysis of omics data as well as, using the course literature, immediately implement those.

Course contents

Algorithms for problems such as alignment, phylogeny, sorting by reversals. An introduction to Hidden Markov Models.

Course literature

To be announced at the web page for the course at least 2 weeks before the course starts.

Examination

- LAB1 - Laboratory Work, 7.5 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

Three laborations.

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.