Institutionen för biokemi och biofysik

Stockholms universitet

Kursplan

för kurs på avancerad nivå

Bioinformatik **7.5 Högskolepoäng**

Bioinformatics **7.5 ECTS credits**

Kurskod:	KB7016
Gäller från:	VT 2019
Fastställd:	2018-08-20
Institution	Institutionen för biokemi och biofysik
Huvudområde:	Biokemi
Fördjupning:	A1N - Avancerad nivå, har endast kurs/er på grundnivå som förkunskapskrav

Decision

This syllabus has been approved by the Area Committee for Natural Sciences at Stockholm University 2018-08-20.

Prerequisites and other conditions for admission to the course

For admission to the course, knowledge corresponding to 60 credits of courses in chemistry, physics, biology and / or computer science is required, which includes at least 7.5 credits of biochemistry. English B / English 6 or equivalent.

Course plan

Code	Name	Högskolepoäng
HELA	Bioinformatik 7.5	

Course content

The course deals with the basics of bioinformatics, especially methods for studying biological sequence data and sequence statistics.

Expected outcome

After completing the course, the student is expected to be able to:

- describe, explain, and compare basic methods for aligning sequences and searching sequence databases
- explain and compare sequence analysis methods
- identify, explain, and analyze methods for predicting properties of proteins
- demonstrate proficiency in solving problems with the help of bioinformatics tools within given time frames

Teaching

The teaching consists of lectures and computer labs. Carrying out computer labs is mandatory. If there are special reasons, the examiner may, after consultation with the relevant teacher, grant the student exemption from the obligation to participate in certain compulsory elements.

Examinations

a. The course is examined as follows:

b. Knowledge control takes place through written tests, written reports and written laboratory reports. The teaching is conducted in English.

c. Grading takes place according to a seven-point goal-related grading scale:

A = Excellent

B = Very good
C = Good
D = Satisfactory
E = Sufficient
Fx = Fail, some more work required
F = Fail, much more work required

d. The course grading criteria are awarded at the start of the course. Late submission of laboratory reports and assignments has consequences for the course's final grade, which is stated in the course's grading criteria.

e. For a pass, a minimum pass grade is required for all components and participation in all compulsory teaching.

f. Students who fail ordinary exams have the right to take additional exams as long as the course is given. The number of test sessions is not limited. Other compulsory course components are also equated with exams. Students who have passed an examination may not take a re-examination for higher grades. Students who have failed an examination twice have the right to request that another teacher be appointed to determine grades on the course. A request to this effect must be made to the department board. The course has at least two examination opportunities per academic year in the years when teaching is given. Intermediate years are given at least one examination opportunity.

g. In the grade Fx, it is possible to supplement up to the grade E. The examiner decides which supplementary tasks are to be performed and which criteria are to apply to be approved on the supplement. The supplement must take place before the next examination opportunity.

Temporary riles

Students may request that an examination be conducted in accordance with this syllabus even after it has ceased to apply, however, no more than three times during a two-year period after teaching on the course has ceased. A request to this effect must be made to the department board. The provision also applies when revising the syllabus.

Limitations

The course cannot be included in the degree together with the course Bioinformatics (KB7004 or KB7017) and the course Structural Biochemistry and Bioinformatics (KE4140).

Other

The course is part of the master's program in molecular techniques in the life sciences, but can also be read as a stand-alone course.

Literature

Course literature is decided by the department board and is then reported on www.kemi.su.se no later than 2 months before the start of the course.