



BB2290 Molecular Biomedicine

7.5 credits

Molekylär biomedicin

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

Specific prerequisites

**Admission requirements for programme students at KTH:

**At least 150 credits from grades 1, 2 and 3 of which at least 100 credits from years 1 and 2, and bachelor's work must be completed. The 150 credits should include a minimum of 20 credits within the fields of Mathematics, Numerical Analysis and Computer Sciences, 5 of these must be within the fields of Numerical Analysis and Computer Sciences, 20 credits of Chemistry, possibly including courses in Chemical Measuring Techniques and 20 credits of Biotechnology or Molecular Biology.

**Admission requirements for independent students:

**A total of 20 university credits (hp) in Biotechnology or Molecular Biology. 20 university credits (hp) Chemistry possibly including courses in Chemical Measuring Techniques, as

well as 20 credits within the fields of Mathematics, Numerical Analysis and Computer Sciences, 5 of these must be within the fields of Numerical Analysis and Computer Sciences. Documented proficiency in English corresponding to English B.

Language of instruction

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

Intended learning outcomes

The aim of the course is to provide the students an overview of the use of molecular technologies in medicine. Invited lectures will present recent scientific achievements in infectious and complex diseases including cancer.

After completed course the students will be able to

- describe current technological trends in medical applications
- discuss research trends in different diseases
- suggest suitable technological approach for a molecular investigation of a disease
- participate in an scientific discussion relating to biomedicine
- critically evaluate the results from scientific publications

Course contents

The course is focused on the use of molecular technologies in biomedical research. The lectures will cover different areas of biomedicine and will include an introduction to the particular field and the current use of modern methods for analysis and detection of respective biomolecules. The lectures will be held by experts in their specific field.

The course may include a project assignment in a selected biomedical field.

Course literature

Molecular Medicine (4th edition), R.J. Trent published by Academic Press. ISBN 9780123814517

textbooks.elsevier.com/web/product_details.aspx?isbn=9780126990577

please see course homepage for more information on new editions/books in conjunction with first lecture of the course.

Examination

- TEN1 - Examination, 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.

Parts of the course is examined in conjunction with the lectures. In order to achieve the highest grades, participation in these excercises is required.

Other requirements for final grade

Examination (TEN1; 7,5 credits, grading scale A-F).

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.