



FCB3207 Molecular Enzymology for Doctoral Students 4.0 credits

Molekylär enzymologi för forskarstuderande

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

Establishment

The official course syllabus is valid from the autumn semester 2026 as decided by the Faculty Board decision PA-2026-0005. Decision date: 2026-06-10

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Eligible for studies at the third-cycle level.

Intended learning outcomes

Upon completion of the course, the course participant is expected to be able to

- demonstrate in-depth knowledge and good analytical ability to explain and analyze complex concepts in enzymology and, based on relevant research literature, communicate the knowledge in writing in a pedagogical way (INL1)

- demonstrate the ability to select an adequate method, model for data processing and analysis of enzyme kinetics data within the framework of a theoretical project, and to communicate the results in writing in a project report (PRO1)
- demonstrate the ability to reflect on the importance and possibilities of enzymology for sustainable development (INL1, PRO1)

Course contents

The course includes concepts such as enzymes' catalytic principles and reaction mechanisms, pH profiles, binding energies, catalytic processes, activation energy, enzyme kinetics, inhibition, practical enzymology and protein technology.

The course is jointly read with BB2020 but offers in-depth knowledge and additional skills corresponding to the doctoral level through critical analysis of relevant articles in the subject and an individual theoretical project work in molecular enzymology.

Examination

- INL1 - Assignment, 1.0 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.

If the course is discontinued, students may request to be examined during the following two academic years.

Criteria for approved project report and written assignment are given in the course memo.

Other requirements for final grade

For the final grade is required 80% active participation in scheduled lectures and approved hand-in assignments that take the form of reflective and critically examining analysis of selected research articles in the field of molecular enzymology (INL1). Furthermore, the student is required to complete an independent individual project with an approved written project report (PRO1).

Transitional regulations

During the discontinuation period, remaining students should contact the examiner about oral 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.