



CB203V Animal Cell Culture Technology for the Production of Biologics 4.0 credits

Mammalieceldodling bioprosessteknik för bioläkemedelproduktion

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 CB203V valid from Spring 2022

Grading scale

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

Education cycle

Second cycle

Main field of study

Biotechnology

Specific prerequisites

Completed bachelor's degree and/or courses in biochemistry, cell biology or microbiology and chemistry totaling at least 30 credits.

Language of instruction

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

Intended learning outcomes

After passing the course, the student should be able to:

- demonstrate knowledge of key theoretical concepts and basic methodology regarding the cultivation process of animal cells
- demonstrate the ability to use acquired knowledge to design, motivate and present strategies for animal cell culture process in order to manufacture a therapeutic biologics

Course contents

The course teaches theory and methodology in the field of cell technology applied to animal cells.

Theoretical concepts included

- basic techniques for animal cell culture in shake flasks and small-scale bioreactors
- description and use of stable expression systems (cell lines)
- overview of animal cell metabolism during cultivation, and its application in process design
- aspects concerning commercial production such as patient safety
- application of knowledge from the course to develop and design culture processes, including aspects of scale-up for industrial application

The student also receives practical training with the support of computer simulation in

- developing a culture process for industrial application

Examination

- LAB1 - Laboratory using computer simulation, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written exam, 2.0 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.

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.