



FSK3503 Cell Culture: Theory and Practice 4.0 credits

Cellodling: teori och praktik

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

Establishment

Course syllabus for FSK3503 valid from Autumn 2018

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Enrolled PhD student.

Language of instruction

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

Intended learning outcomes

Upon completion of the course, students should be able to:

- account for the basic characteristics of animal cells

- account for the main needs of cultured cells / requirements for cell environment in cell culture
- assess which equipment and consumables are needed for cell culture and for experiments on living cells
- describe which modern techniques are used in cell culture
- from the knowledge about the cell culture techniques and cell properties, be able to assess and motivate which cells and which cell culture techniques are most suitable for different experiments
- perform the basic procedures in cell culture (count, replat cells, assess their condition)
- understand the risks and ethical problems related to cell culture

Course contents

Purposes of cell culture. Safety and legislation. Cell culture laboratory: equipment, cleaning, appliances. Cell culture methods. Media and solutions. Freezing and thawing. Contamination of cell cultures. Methods for measuring cell viability / cell death.

Disposition

The course consists of 5 lectures, 3 laboratory exercises (4 hours each), and a seminar.

Laboratory exercises:

- replating of animal cells (two lab occasions)
- assessment of cell viability / cell death

Course literature

Lecture notes, cell culture protocol.

ECACC Handbook - Fundamental Techniques for ECACC Cell Lines (online).

Examination

- TEN1 - Written exam, 1.5 credits, grading scale: P, F
- LAB1 - Laboratory exercises, 2.0 credits, grading scale: P, F
- SEM1 - Seminar, 0.5 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.

Other requirements for final grade

Written exam (TEN1 1.5 credits, grade scale: P, F)

Laboratory exercises (LAB1 2.0 credits, grade scale: P, F)

Seminar (SEM1 0.5 credits, grade scale: P, 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.