



Applied Molecular Biology

Tillämpad molekylärbiologi

7.5 credits

Ladok Code: 42K12D

Version: 2.0

Established by: The Teaching Committee 2013-05-23

Valid from: Autumn 2013

Education Cycle: Second cycle

Main Field of Study (Progressive Specialisation): Biotechnology (A1N)

Disciplinary Domain: Technology

Prerequisites: Meets requirements for acceptance to a graduate engineer programme.

This course is based on and will develop knowledge from the courses Biochemistry and Technical Microbiology.

Subject Area: Biotechnology

Grading Scale: ECTS-credits

Content

- construction of molecular biology vectors
- transfection
- reprocessing
- detection of gene products.

Learning Outcomes

After completing this course, students must be able to:

- *Knowledge and Understanding*

1.1 describe the basic principles of gene cloning

1.2 account for some selected gene cloning techniques used for gene analysis

1.3 show how gene cloning is used in research and biotechnology

- *Skills for ability*

2.1 perform standard laboratory molecular biological techniques

2.2 Orally and in a written report present a deepening project

Forms of Teaching

The teaching comprises the following elements:

- lectures
- laboratory work
- project work

Teaching will take place through the medium of English.

The language of instruction is English.

Forms of Examination

The course will be examined through the following examination elements:

Learning outcomes:

Credits: 0.5
Grading scale: Fail (U) or Pass (G)

Examination

Learning outcomes:
Credits: 4.5
Grading scale: ECTS-credits

Learning outcomes:
Credits: 0.5
Grading scale: Fail (U) or Pass (G)

Laboratory work

Learning outcomes:
Credits: 2
Grading scale: Fail (U) or Pass (G)

To pass the course, students must:

- Pass a single written examination
- Describe their laboratory work in a report
- Present the project at a seminar

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

Literature and Other Teaching Materials

- Brown: Molecular Cloning and DNA Analysis: An Introduction, Blackwell Publishing
- Supplementary copied material.

Student Influence and Evaluation

The head of department and teacher responsible for the course are responsible for ensuring that students are invited systematically and regularly to put forward their views on the course. The results of the evaluations will be reported back to the students and will form the basis for the future structure of the course.

Miscellaneous