



Faculty of Health, Science and Technology
Biology

Syllabus

Cellbiology

Course Code:	BIG003
Course Title:	Cellbiology <i>Cellbiologi</i>
Credits:	15
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has only upper-secondary level entry requirements (G1N)

Major Field of Study:
BIA (Biology)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2018-08-30, and is valid from the Spring semester 2019 at Karlstad University.

Prerequisites

General admission requirements and upper secondary level Mathematics C/3b/3c, Biology A/1 and Chemistry A/1, or equivalent

Learning Outcomes

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

1. give an account of cell and virus structures, different cellular processes and functions such as protein synthesis, genetic and metabolic functions, as well as cell cycle and cell signaling functions,
2. use sterilisation techniques, cell and molecular biological and microbiological methods of analysis,
3. seek, critically assess, compile and present information in the course area.

Content

The course centres on cell biology theory instructed in the form of lectures, discussions and study questions. Areas treated are biomolecules, virus structure and prokaryotic and eukaryotic cell structures. A number of different cellular processes and functions such as DNA replication, gene regulation, cell cycle regulation, mitosis and meiosis, cell signalling, protein synthesis, prokaryotic and eukaryotic metabolism.

The practical and methods-oriented part of the course involves laboratory experiments and report writing and treats sterilisation techniques, cell and molecular biological and micro biological analysis methods. Under supervision, students develop skills in seeking information in the area, critically and ethically assessing it, and compiling and presenting it with a focus on gene technology as well as medically important micro organisms and the issue of antibiotic resistance.

Reading List

See separate document.

Examination

Assessment is based on:

Learning outcome 1: written exam

Learning outcome 2: laboratory work and lab reports

Learning outcome 3: orally and in writing.

Grades

One of the grades Distinction (VG), Pass (G) or Fail (U) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.