

Evolution

Programme course

6 credits

Evolution

NBIA26

Valid from: 2017 Spring semester

Determined by

Board of Studies for Chemistry, Biology
and Biotechnology

Date determined

2017-01-25

Main field of study

Biology

Course level

First cycle

Advancement level

G1X

Course offered for

- Biology, Bachelor's Programme

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Intended learning outcomes

The course will give a basic understanding of evolutionary concepts and theories, and also to provide fundamental skills in how to execute common learning activities at a university. After the course the student should be able to:

- explain and exemplify fundamental evolutionary concepts and processes
- describe how to determine which evolutionary processes are involved in a given situation
- explain the origin of life (macro evolution), speciation and cladistics
- describe the relationship between evolution and the society
- apply fundamental mathematical knowledge
- follow rules for how to conduct group work, i.e. seminars and labs
- list guidelines for good written communication.

Course content

The course in evolution encompasses evolutionary mechanisms and microevolution: natural selection, adaptation, migration, chance and genetic drift. Macro evolution is covered through the origin of life, speciation, mass extinction and cladistics. Students will also discuss how evolution is related to the society, e.g. religion (intelligent design) and politics (biologism). Practicals and seminars cover and exemplify central aspects of evolution. The course also introduces and exercises how a seminar is prepared and executed. During the course the application of mathematics to biological and chemical problems is exercised.

Teaching and working methods

Learning activities are lectures, seminars and laboratory work.

Examination

UPG1	Assignments	2 credits	U, G
TEN1	Written examination	4 credits	U, 3, 4, 5

To pass the UPG1 active participation in all seminars is required and all assignments must be approved. In addition a written assignment should be completed including the evaluation of the texts of other students on the course.

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för fysik, kemi och biologi

Director of Studies or equivalent

Agneta Johansson

Examiner

Jenny Hagenblad

Education components

Preliminary scheduled hours: 44 h

Recommended self-study hours: 116 h

Course literature

Additional literature

Books

Freeman, S. & Herron, J.C., *Evolutionary Analysis* 5th ed. eller senare Pearson
Prentice Hall

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.