



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Naturvetenskapligt basår: Biologi 1

Pre-University Course in Natural Sciences: Biology 1

TBAB01, 7 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED TB

Date of Decision: 2023-04-19

General Information

Compulsory for: TNB1-NABA

Language of instruction: The course will be given in Swedish

Aim

The purpose of the course is to complement an upper secondary school education in Biology 1.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

Does not exist in this form.

Competences and skills

For a passing grade the student must

Does not exist in this form.

Judgement and approach

For a passing grade the student must

Does not exist in this form.

Contents

Ecology

- Ecosystems and biogeochemical cycles. Effects of disturbance on carrying capacity, biodiversity and an ecologically sustainable development.
- Population ecology, composition and species diversity.

Genetics

- Cell biology and genetics (e.g. cell division, replication, protein synthesis).
- Ethical considerations connected to genetic engineering.

Evolution

- The origin of life. Evolutionary theory – mechanisms and history.
- The role of behaviour in natural and sexual selection.
- Taxonomic systems and principles for classifying organisms.

The nature of biology and its working methods

- Models and theories - their use, validity and limitations.
- Experimental work, field-studies and hypothesis testing. Evaluating results and basic statistics.
- Simulation of evolutionary processes.
- Using biological models to discuss societal issues, such as sustainable development.

Examination details

Grading scale: UG - (U,G) - (Fail, Pass)

Assessment: Written exams and passed exercises/excursions/labs.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0120. **Name:** Biology 1, Written Exam.

Credits: 5. **Grading scale:** UG. **Assessment:** Written exam.

Code: 0220. **Name:** Exercises/Excursions/Labs .

Credits: 2. **Grading scale:** UG. **Assessment:** Passed exercises/excursions/labs and, when applicable, lab reports.

Admission

The number of participants is limited to: No

Reading list

- Björndahl, Landgren & Thyberg: SPIRA Biologi 1. Liber, 2017, ISBN: 9789147116003.

Contact and other information

Course coordinator: Fredrik Andreasson, fredrik.andreasson@biol.lu.se

Course homepage: <https://www.naturvetenskap.lu.se/>

Further information: The scope for this course is expressed in access education credits (fup).