



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Naturvetenskapligt basår: Biologi 2

Pre-University Course in Natural Sciences: Biology 2

TBAB05, 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 2.

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

Cell biology

- Cell life cycles, differentiation and communication.
- Organelle functions, e.g. photosynthesis, metabolism and transport over membranes.
- Molecular biology – applications, opportunities, risks and ethical issues.

Organismal biology

- Animal physiology. Organ-, nervous- and hormonal systems from an evolutionary perspective.
- Immunology, microbiology and virology.
- Living conditions and health/disease. Medical ethics. What happens in the body during menstruation, love, sex and pregnancy? Sexually transmitted diseases.
- Life cycles and physiology of plants and fungi.

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.
- Physiological studies and experiments using modern equipment.
- Simple methods of molecular biology.
- How religion, ethics and sustainable development relate to biological models and theories.

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 2, 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 & Castenfors: SPIRA Biologi 2. Liber, 2018, ISBN: 9789147126248.

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).