



# LTH

FACULTY OF  
ENGINEERING

*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](mailto: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).