



# LTH

FACULTY OF  
ENGINEERING

*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](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).