

## Ecology (C002457)

**Course size** *(nominal values; actual values may depend on programme)*

**Credits 5.0**

**Study time 136 h**

**Course offerings and teaching methods in academic year 2023-2024**

A (semester 2)

Dutch

Gent

lecture

seminar

**Lecturers in academic year 2023-2024**

Lens, Luc

WE11

lecturer-in-charge

Strubbe, Diederik

WE11

co-lecturer

Verschuren, Dirk

WE11

co-lecturer

**Offered in the following programmes in 2023-2024**

[Bachelor of Arts in Philosophy](#)

**crdts**

**offering**

5

A

[Bachelor of Science in Biology](#)

5

A

**Teaching languages**

Dutch

**Keywords**

Evolution, natural selection, population, community, ecosystem

**Position of the course**

Students gain insight into important evolutionary and ecological concepts, and key concepts related to the different levels of organismal organisation (population, community, ecosystem).

**Contents**

A first section deals with basic concepts of evolutionary theory and of micro- and macro-evolutionary processes. The evolutionary approach is illustrated with examples from the field of behavioural ecology. A second section focuses on two important levels of organismal organisation, i.e. population and community. This part deals with important properties such as density, demography, growth, regulation, structure, functionality, niche, interaction, and spatio-temporal variation. In a third section patterns and processes at the level of the earth's ecosystem are studied. After a brief introduction to the origin of life, important terrestrial, aquatic and marine ecosystems - and main processes therein - are reviewed. A final section focuses on anthropogenic activities affecting abiotic and biotic components of the earth's ecosystem.

**Initial competences**

The part on evolution builds on basic concepts of cell biology and genetics (Bachelor 1, 1st semester).

**Final competences**

- 1 To understand the basic concepts of evolution and natural selection.
- 2 To know the major patterns and processes at the levels of population, community and ecosystem.
- 3 To report on these concepts, patterns and processes in accurate scientific language.
- 4 To apply these concepts, patterns and processes to ecological problem-solving.
- 5 To understand the interface between evolutionary ecology and other biological disciplines.
- 6 The following numbers refer to the program specific learning outcomes bachelor Biology that are being evaluated directly or indirectly within this course.

**Conditions for credit contract**

Access to this course unit via a credit contract is determined after successful competences assessment

**Conditions for exam contract**

This course unit cannot be taken via an exam contract

**Teaching methods**

Seminar, Lecture

**Extra information on the teaching methods**

because of COVID19 modified forms of work may be implemented when necessary

**Learning materials and price**

Free syllabus available

**References**

Solomon, EP, Berg, LR & Martin, DW. 2002. Biology 6th edition, Thomson Learning Inc.

**Course content-related study coaching**

During practical classes, basic evolutionary and ecological concepts are illustrated with practical applications. During these classes, students can pose general questions on the course's content.

**Assessment moments**

end-of-term and continuous assessment

**Examination methods in case of periodic assessment during the first examination period**

Written assessment

**Examination methods in case of periodic assessment during the second examination period**

Written assessment

**Examination methods in case of permanent assessment**

Written assessment

**Possibilities of retake in case of permanent assessment**

not applicable

**Extra information on the examination methods**

Theory: written

Practicals: written

**Calculation of the examination mark**

Theory 70% ; practicals 30%

Students who are unlawfully absent from the practical exam (1st session) may not participate in the theoretical exam (1st session). They must take both exams during the 2nd session