Course Specifications

From the academic year 2010-2011 up to and including the academic year 2011-2012

Ecology (C001281)

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

Credits 5.0 **Study time 136.0 h** **Contact hrs** 38.0 h

Course offerings and teaching methods in academic year 2011-2012

A (semester 2)	lecture	25.0 h
	seminar: coached exercises	15.0 h

Lecturers in academic year 2011-2012

Lens, Luc	WE11	lecturer-in-charge
Verschuren, Dirk	WE11	co-lecturer

Offered in the following programmes in 2011-2012	crdts	offering
Bachelor of Science in Chemistry (main subject Chemistry and Technology)	5	A
Bachelor of Science in Chemistry	5	A

Teaching languages

Dutch

Keywords

Evolution, natural selection, population, community, ecosystem

Level

introductory

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).
B 1.1, B 1.5, B 2.2, B 2.4, B 3.2, B 3.4, B 3.5, B 4.2, B 5.1

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

The student understands the basic concepts of evolution and natural selection, and knows the major patterns and processes at the levels of population, community and ecosystem.

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

Lecture, seminar: coached exercises

Extra information on the teaching methods

Learning materials and price

Syllabus available
Price: 20 €

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.

Evaluation methods

end-of-term evaluation

Examination methods in case of periodic evaluation during the first examination period

Written examination with open questions, written examination, oral examination

Examination methods in case of periodic evaluation during the second examination period

Written examination with open questions, written examination, oral examination

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

not applicable

Extra information on the examination methods

Theory: partly oral with written preparation, partly written
Practicals: written

Calculation of the examination mark

Theory 70% ; practicals 30%