



# Course Specifications

Valid in the academic year 2012-2013

## Ecology (C002457)

**Course size** (nominal values; actual values may depend on programme)  
**Credits** 5.0      **Study time** 136.0 h      **Contact hrs** 43.0 h

### Course offerings and teaching methods in academic year 2012-2013

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

### Lecturers in academic year 2012-2013

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

### Offered in the following programmes in 2012-2013

	crdts	offering
<a href="#">Bachelor of Arts in History</a>	5	A
<a href="#">Bachelor of Arts in Philosophy</a>	5	A
<a href="#">Bachelor of Science in Biology</a>	5	A
<a href="#">Bachelor of Arts in Archaeology</a>	5	A
<a href="#">Bachelor of Arts in Art Science</a>	5	A
<a href="#">Bachelor of Arts in Moral Sciences</a>	5	A
<a href="#">Bachelor of Arts in East European Languages and Cultures</a>	5	A
<a href="#">Bachelor of Arts in Oriental Languages and Cultures (main subject India)</a>	5	A
<a href="#">Bachelor of Arts in Oriental Languages and Cultures (main subject Japan)</a>	5	A
<a href="#">Bachelor of Arts in Oriental Languages and Cultures (main subject Mesopotamia)</a>	5	A
<a href="#">Bachelor of Arts in Oriental Languages and Cultures (main subject China (China Track))</a>	5	A
<a href="#">Bachelor of Arts in Oriental Languages and Cultures (main subject China (UGent Track))</a>	5	A
<a href="#">Bachelor of Arts in Oriental Languages and Cultures (main subject Arabic and Islamic Studies)</a>	5	A
<a href="#">Bachelor of Arts in African Languages and Cultures</a>	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**

- To understand the basic concepts of evolution and natural selection.
- To know the major patterns and processes at the levels of population, community and ecosystem.
- To report on these concepts, patterns and processes in accurate scientific language.
- To apply these concepts, patterns and processes to ecological problem-solving.
- To understand the interface between evolutionary ecology and other biological disciplines.

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

### **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%

### **Facilities for Working Students**

### **Addendum**