



Faculty of Health, Science and Technology
Biology

Syllabus

Ecology

Course Code:	BIG005
Course Title:	Ecology <i>Ekologi</i>
Credits:	15
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has only upper-secondary level entry requirements (G1N)

Major Field of Study:
BIA (Biology)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2019-02-18, and is valid from the Autumn semester 2019 at Karlstad University.

Prerequisites

General admission requirements, plus upper secondary school level Mathematics C/3b/3c, Biology A/1, and Chemistry A/1, or Natural Science 2 (field-specific eligibility 12A, with the exception of Biology B/2, Chemistry B/2, and Physics A/1), or equivalent

Learning Outcomes

Upon completion of the course, students should be able to:

1. give an account of how the basic principles of natural and reproductive selection cause variation in the physiology, morphology, and behaviour of organisms,
2. give an account of theories concerning the formation of species, how relationships between species are studied, and patterns of species distribution,
3. give an account of and quantify the dynamics, growth, and regulation of populations,

4. give an account of social ecology theories and various interactions between and within species,
5. explain the significance of biological diversity and quantify it,
6. give an account of the function and organisation of the ecosystem,
7. give an account of how humans are part of and affect biological systems, as well as strategies for sustainable development and preservation of biological systems and functions,
8. plan and conduct field studies, analyse the data, and report the results, and
9. examine and discuss primary scientific texts on ecology.

Content

The course covers the basics of ecology and evolution. It begins with an introduction, focused on how evolutionary processes form organisms and their adaptations, and moves on to the impact of the physical environment on patterns of species distribution, mechanisms that influence the temporal and spatial variation of populations, ecosystem processes, and ways in which humans are part of and affect biological systems.

Reading List

See separate document.

Examination

Learning objectives 1-7: Assessment is based on an individual written exam

Learning objective 8: Assessment is based on a written report (Field Study 1) and an oral report (Field Study 2)

Learning objective 9: Assessment is based on oral and/or written reviews of the course literature in connection with literature seminars

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.

The course includes fieldwork, and students may be required to meet the cost of this component.