Faculty of Health, Science and Technology
Environmental Science

Syllabus

The natural science basis of risk and environmental issues

Course Code:	RHG100
Course Title:	The natural science basis of risk and environmental issues *Risk- och miljöfrågornas naturvetenskapliga grunder*
Credits:	15
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has only upper-secondary level entry requirements (G1N)

Major Field of Study:
MXA (Environmental Science)
RHA (Risk Management)
RIM (Risk and Environmental Studies)

Course Approval
The syllabus was approved by the Faculty of Health, Science and Technology 2018-02-28, and is valid from the Autumn semester 2018 at Karlstad University.

Prerequisites
General admission requirements and upper secondary level Civics A/1b/1a1/1a2, Mathematics B/2a/2b/2c and Natural Science B/2 (field-specific eligibility A14), or equivalent. Physics A1, Chemistry A/1 and Biology A1 combined can replace Natural Science B/2, or equivalent.

Learning Outcomes
The aim of the course is that students acquire the basic knowledge of natural sciences required to continue studying risk and environmental issues in an interdisciplinary way and to prepare for a professional role in the area.

Upon completion of the course, students should be able to:
- describe and explain processes and cycles in the abiotic and biotic system of the earth that are relevant to the risk and environmental issues treated in the course,
- describe different natural resources and ecosystem services and demonstrate understanding of their importance, circulation and sustainability from a natural science perspective,
- systematically compile and describe natural science knowledge relevant to analysing various nature-related environmental risks, and
- present and discuss their own work, orally and in writing.

Content
The course comprises and focuses on the basic natural science knowledge that is necessary for

analysing, discussing and managing current risks and environmental problems, especially in terms of meteorology/climatology, ecology, soil geology and hydrology. In relation to environmental risks, such as pollution in air, soil and water, or the effects of human exploitation of natural resources and eco system services, the course includes studies of bio- geochemical cycles, photosynthesis, radiation balance and soil formation. The impact of a changed future climate is introduced.

Students carry out a specialisation project and present their results orally at a seminar.

Reading List
See separate document.

Examination
Assessment is based on an individual quizz, a written exam, group seminars and individual written assignments, presented orally.

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.

Required course for the Bachelor degree programme in Environment and Safety, 180 ECTS cr.