



FACULTY OF ARTS AND SOCIAL SCIENCES

Degree Programme in Environmental Science with Specialisation in Risk Management

Miljövetarprogrammet - inriktning riskhantering

Programme code: SGMIR

Credits: 180

Education level: First cycle

Degree type: General qualification

Language of instruction: Swedish and English

Approved by

Faculty Board of Arts and Social Sciences, 05 February 2026

Effective from

Autumn semester 2026

Entry requirements

General entry requirements plus upper-secondary level

Civics 1b or 1a1 + 1a2 and Mathematics 2a or 2b or 2c

or

Civics level 1b or level 1a1+1a2, Mathematics level 2a or level 2b or level 2c.

Free elective courses may have other requirements.

General information

The Degree Programme in Environmental Science with Specialisation in Risk Management leads to a Degree of Bachelor of Social Science with a major in Environmental Science. The programme centres on societal management of environmental problems within the framework of sustainable development. Environmental problems could be seen as societal risks, meaning that risk management provides knowledge and skills that supplement the environmental sciences well.

The programme is multidisciplinary, allowing students to acquire broad and versatile knowledge that provides a solid foundation for analysing environmental problems and risks, as well as developing strategies for managing them and contributing to sustainable development. The programme includes studies in subjects related to natural sciences as well as social sciences and the humanities. The connection to practical environmental work is emphasised and maintained through study visits, guest lectures, and a practical placement period in the fourth semester. A key focus is on developing communication skills, both in terms of communication with the public and decision-makers as well as experts in various fields. The programme structure and exchange opportunities with partner universities facilitate studying part of the programme abroad.

Graduates are qualified to work with environmental issues, environmental risk management, and sustainable development in various investigative, analytical, governing and planning capacities in the public and private sectors, or continue with master's level studies. Examples of possible career fields are environmental and safety coordination, environmental and climate strategy work, climate adaptation, organisational development, consultant work and more.

Programme outcomes

For programme completion, students must meet the national requirements for a Degree of Bachelor.

National outcomes

Knowledge and understanding

For a Degree of Bachelor the student shall

- demonstrate knowledge and understanding in the main field of study, including knowledge of the disciplinary foundation of the field, knowledge of applicable methodologies in the field, specialised study in some aspect of the field as well as awareness of current research issues.

Competence and skills

For a Degree of Bachelor the student shall

- demonstrate the ability to search for, gather, evaluate and critically interpret the relevant information for a formulated problem and also discuss phenomena, issues and situations critically
- demonstrate the ability to identify, formulate and solve problems autonomously and to complete tasks within predetermined time frames
- demonstrate the ability to present and discuss information, problems and solutions in speech and writing and in dialogue with different audiences, and
- demonstrate the skills required to work autonomously in the main field of study.

Judgement and approach

For a Degree of Bachelor the student shall

- demonstrate the ability to make assessments informed by relevant disciplinary, social and ethical aspects
- demonstrate insight into the role of knowledge in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the need for further knowledge and undertake ongoing development of his or her skills.

Independent project (degree project)

A requirement for the award of a Degree of Bachelor is completion by the student of an independent project (degree project) for at least 15 credits in the main field of study.

Programme structure

The courses included in the programme cover knowledge based in the natural sciences, social sciences and the humanities, although the specific emphasis may vary between courses. The natural science components are primarily intended to provide a fundamental scientific understanding of the causes and consequences of environmental problems. Components based in the humanities cover, for example, environmental history and literary seminars in certain courses. Theoretical knowledge and practical application skills are reinforced and specialised progressively throughout the programme. To encourage students to take responsibility for their own learning, instruction includes student-led seminars and self-evaluation.

Sustainable development is a fundamental part of environmental science education and forms an integral part of the programme. The concept of sustainable development, and the various aspects that relate to it, is examined and problematised continually throughout the programme. Sustainable development is also the societal goal that many of our students will work with in their future professions. Equality and gender perspectives are also important aspects of the programme and included in several courses via concepts such as social

sustainability, social justice, environmental justice, and intersectional analysis. These concepts are most emphasised in the course *Environment, risk and sustainable development* in the fourth semester, as well as in the theory and methods course in the final semester.

In the first year, all students take the same courses. The first semester provides knowledge and understanding of some of the most central environmental issues and their consequences for humans, society and nature, as well as the challenges these issues bring from a management perspective. Courses include, among other things, the fundamental science behind environmental changes, a systemic understanding of biotic and abiotic systems affected by environmental problems, and historical and ethical perspectives on environmental issues. In the second semester, the focus is on various strategies for managing these environmental issues at the societal level, such as organisation, legislation, and other means of control. The semester includes environmental law, environmental economy, governance, environmental management and environmental communication. Concepts and theories related to the subject area are introduced in these semesters.

The third semester comprises a course focusing on risk management from an environmental science perspective. Part of the course covers various forms of air and water pollution, the impacts thereof, and management strategies. The other,

more dominant part of the course emphasises climate-related risks and climate adjustment, as well as transition and societal transformation with climate change in focus. The fourth semester includes the course **Environment, risk and sustainable development**, where students deepen their knowledge of key theories in the subject area and further develop their academic skills related to, for example, research methodology and academic writing. This semester also includes 15 credits of free elective courses. Students are recommended to take the courses **Internship: environmental science** and **Protection of biodiversity: from the local to the global**, but are free to choose other courses as well. Students organise their practical placement themselves with support from the programme director. Placements cannot be guaranteed by the university.

Third-year students can customise their studies by choosing freestanding courses for the fifth semester, totalling 30 credits. They may specialise further in their main field of study, environmental science, or broaden their education by taking courses in other fields. Students can also choose to study abroad.

The sixth and final semester emphasises specialisation, with students studying scientific methods and theory and completing a degree project in environmental science.

Programme curriculum

The study route of the programme is outlined below. Note that titles and order of programme courses may vary from the list below.

Semester 1

Environmental science 1: the basics, 30 credits

Semester 2

Environmental science 2: strategies, control and governance, 30 credits

Semester 3

Risk management: pollution and climate change, 30 credits

Semester 4

Environment, risk and sustainable development, 15 credits

Free elective courses, 15 credits

Examples of free elective courses:

- Internship: environmental science, 7.5 credits
- Protection of biodiversity: from the local to the global, 7.5 credits

Semester 5

Free elective courses, 30 credits

Semester 6

Method and theory in risk and environmental studies, 15 credits

Independent project in environmental science, 15 credits

Title of qualification

Degree of Bachelor of Science

Major: Environmental Sciences

Credit transfer

According to the Higher Education Ordinance Ch. 6 Sec. 6-8 students have the right to transfer credits and have prior learning recognised upon approval.

Additional information

The local regulations for first and second cycle education at Karlstad University stipulate the obligations and rights of students and staff.

A previous version of the programme syllabus has been approved: 26 October 2023, reg. no. HS 2023/863, effective from the autumn semester 2024.