



Faculty of Arts and Social Sciences

Programme Syllabus

Reg.no. HS 2023/863

Degree Programme in Environmental Science with a Specialisation in Risk Management

Programme Code:	SGMIR
Programme Title:	Degree Programme in Environmental Science With Specialisation in Risk Management
Credits:	180
Programme Approval:	The programme syllabus was approved by the Faculty Board of Arts and Social Sciences on 26 October 2023 and applies as of the autumn semester of 2024.
Language of Instruction:	Swedish and English
Education Cycle:	First cycle
Degree Type:	General
Entry Requirements:	General entry requirements, plus Civics 1b or 1a1 + 1a2, Mathematics 2a or 2b or 2c, and Science Studies 2. Science Studies 2 can be replaced by Physics 1, Chemistry 1, and Biology 1. Optional courses may have other requirements.

General Information

The Degree Programme in Environmental Science with a Specialisation in Risk Management results in Degree of Bachelor of Science 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 Degree Programme in Environmental Science with a Specialisation in Risk Management provides a multidisciplinary education. Students acquire broad and versatile knowledge which provides a broad foundation for analysing environmental problems and risks, as well as producing strategies for managing problems and risks, and contributing to a sustainable development. The programme includes studies in subjects related to natural sciences as well as social sciences and the humanities. The connection to practical environment work is

emphasised and maintained through study visits, guest lectures, and a practical placement period in the fourth semester. Great emphasis is placed on developing communication skills, both in terms of communication with the public, as well as with decision-makers and experts in various fields. The programme's structure as well as agreements and exchange programmes with universities in other countries facilitate studying parts of the programme abroad.

Graduates are qualified to work with issues related to the environment, environmental risk management, and sustainable development in various investigative, analytical, governing and planning capacities in the private and public sectors, or continue with master's level studies. Examples of possible career fields are environment 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.

Programme Structure

The courses contain knowledge based on natural sciences, social sciences, and the humanities, even if the specific emphasis may vary between the courses. Theoretical knowledge and practical application skills are reinforced and specialised progressively throughout the three-year study period. To encourage students to take responsibility for their own learning, instruction includes student-led seminars, independent assignments, and self-evaluation.

Sustainable development is a fundamental part of environmental science education, and it permeates the degree programme. The concept of sustainable development, or the various aspects that relates to it, is examined and problematized 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 is 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 second year of studies, as well as in the final-year theory and method course.

The first year is studied jointly by all students and the first semester provides knowledge and understanding regarding 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. Among other things, courses include the fundamental science behind changes in the environment, a systemic understanding of biotic and abiotic systems affected by environmental problems, and historical and ethical perspectives on environmental issues. During the second semester, emphasis is on various strategies for managing environmental issues at a societal level, such as organisation, legislation, and other means of control. The second semester includes environmental law, environmental economy, governance, environmental management and environmental communication. Central concepts and theories within the field are introduced during the first year.

The second year includes both mandatory and optional courses. The third semester comprises a mandatory course focusing on risk management from an environmental science perspective. Part of the course examines various forms of air and water pollution, its consequences and how to manage it. 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 a mandatory course which concludes with an independent project. The course provides more in-depth knowledge on central theories within the field, and further develops students’ academic writing and ability to conduct scholarly projects. Semester 4 also comprises two optional but recommended courses: one practical placement course and one focusing on collaboration and preserving biodiversity. Students arrange their practical placement themselves with support from the programme director. The University cannot guarantee placements.

Third-year students can customise their studies by choosing freestanding courses for the fifth semester. They may specialise further in their main field of study – Environmental Studies – or choose courses in other fields to achieve a broader education. Students can also choose to study abroad. The sixth and final semester emphasises specialisation by students studying methods and theory and conducting a degree project Environmental Studies.

Programme Curriculum

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

Year 1

- Environmental science 1: the basics, 30 credits (mandatory)
- Environmental science 2: strategies, control and governance, 30 credits (mandatory)

Year 2

- Risk management: pollution and climate change, 30 credits (mandatory)
- Environment, risk and sustainable development, 15 credits (mandatory)
- Practical placement, 7.5 credits (optional, recommended)
- Loss of biodiversity: local and global perspectives, 7.5 credits (optional, recommended)

Year 3:

- Elective courses, 30 credits
- Method and theory in risk and environmental studies, 15 credits (mandatory)
- Independent project for a Degree of Bachelor of Science in environmental sciences, 15 credits (mandatory)

Title of Qualification

Bachelor of Science

Main field of study: Environmental Sciences

Transfer of credits

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.