

Societal Challenges and Nature Based Solutions 7.5 credits

Samhällsutmaningar och naturbaserade lösningar 7.5 hp

Second cycle

Main field: Environmental Science, Second cycle, has only first-cycle course/s as entry requirements (AIN)

Syllabus is adopted by the Research and Education Board (2024-03-05) and is valid for students admitted for the autumn semester 2024.

Placement in the Academic System

The course is included in the Master's Programme (60 credits) in Applied Environmental Science - Ecosystem Services and Nature Resource Management. The course is given as a single subject course.

Prerequisites and Conditions of Admission

Degree of Bachelor of Science with a major in Environmental Science, Biology, Chemistry or Geology including an independent project 15 credits or Degree of Bachelor of Science in Engineering with an environmental orientation including an independent project 15 credits. The degree must be equivalent to a Swedish kandidatexamen or Swedish högskoleingenjörsexamen and must have been awarded from an internationally recognised university. English 6. Exemption of the requirement in Swedish is granted.

Course Objectives

The aim of the course is that the student develops an in-depth knowledge of how nature-based solutions and the promotion of ecosystem services can be used to meet various societal challenges. The aim is also for the student to acquire knowledge based on how companies, authorities and other organizations relate to these challenges from the perspective of nature-based solutions. Moreover, the goal is that the student develops skills in assessing the suitability and application of various nature-based solutions based on given economic, ecological and social conditions. Furthermore, the aim of the course is that the student considers the effects of nature-based solutions for sustainable development and understands its importance for equal societal development in national and international perspectives.

Following successful completion of the course the student should be able to:

Knowledge and understanding

- explain how nature-based solutions at different levels in society can be used to successfully meet various societal challenges and achieve sustainable development

Skills and ability

- interpret, analyze and use interdisciplinary literature based on studies performed with quantitative and qualitative methods
- present, discuss and compile conclusions and action proposals for tackling the societal challenges that the course focuses on
- discuss economic, social and environmental conflicts that are considered when developing and implementing nature-based solutions

Judgement and approach

- critically evaluate own and others' results and suggest improvements in the light of sustainable development and ethical and gender equality perspectives
- assessing the role of science in decision-making around measures linked to sustainable development

Primary Contents

The course introduces the concept of nature-based solutions and provides insight into its importance in dealing with various societal challenges by protecting, developing and/or creating ecosystems while promoting biodiversity and human well-being. Societal challenges linked to climate change, ecosystem resilience, biodiversity, population growth and urbanization as well as resource efficiency and circularity lay the foundation for knowledge acquisition. Multifunctional measures based on the functions ecosystems contribute, so-called ecosystem services, have a significant role in the course. Global, regional and local societal challenges and nature-based solutions are studied. The potential of nature-based solutions to, for example, face climate change, increase the resilience and biodiversity of ecosystems and promote sustainable urbanization and circular resource use is analyzed and discussed. Furthermore, the course deals with practical examples of how companies, authorities and other organizations work with nature-based solutions and what results have been achieved as well as the impact this has had on sustainability, diversity and ethical aspects.

Teaching Formats

Teaching includes lectures, seminars and project work. Project work is done individually or in groups. Supervision is also included in the teaching.

Examination

The overall grades of F (Insufficient), E (Sufficient), D (Satisfactory), C (Good), B (Very Good), A (Excellent) will be awarded for the course.

Examination takes place through mandatory seminars and a written project work which is done individually or in groups.

Name of the test		Grading
Seminars	4 credits	U/G/VG
Project Work	3,5 credits	U/G/VG

If there are special reasons, the examiner may make ex-

ceptions from the specified examination format and allow a student to be examined in another way. Special reasons can e.g. be a decision on learning support.

For elite sports students according to Riktlinjer för kombinationen studier och elitidrott vid Högskolan i Halmstad, DNR: L 2018/177, the examiner has the right to decide on an adapted examination component or let the student complete the examination in an alternative way.

Course Evaluation

Course evaluation is part of the course. This evaluation should offer guidance in the future development and planning of the course. Course evaluations should be documented and made available to the students.

Course Literature and Other Study Resources

Brears, Robert C. *Nature-Based Solutions to 21st Century Challenges*. Routledge, latest edition

Scientific articles may be added.