

MVEN14, Environmental Science: Applied Environmental Science, 15 credits

Miljövetenskap: Tillämpad miljövetenskap, 15 högskolepoäng
Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2009-10-22 to be valid from 2009-10-22, spring semester 2010.

General Information

The course is a compulsory second cycle component of a degree of Master of Science (120 credits) in Environmental Science and in Environmental Health

Language of instruction: Swedish

Main field of studies

Environmental Science

Environmental Health

Depth of study relative to the degree requirements

A1F, Second cycle, has second-cycle course/s as entry requirements

A1F, Second cycle, has second-cycle course/s as entry requirements

Learning outcomes

The aim of the course is to enable students to acquire the following knowledge and skills on completion of the course:

Knowledge and understanding

On completion of the course, the students shall be able to

- demonstrate knowledge of how to use scientific, economic and societal aspects to investigate environmental problems at a regional level

Competence and skills

On completion of the course, the students shall be able to

- apply the principal points of departure and the tasks involved in a given environmental issue (a so called case study) at the regional level, and design a procedure for how to solve an environmental issue of this kind
- use the principles of systems analysis and use tools of systems analysis to manage information material from fields of both science and social sciences
- engage in interdisciplinary work, collect and critically review information from different research traditions and from public authorities, master the use of aids in performing project work and manage an investigation project, and report the project work in writing in accordance with the formal instructions given

Judgement and approach

On completion of the course, the students shall be able to

- assess research articles using advanced statistics of for example meta-analysis and time series analysis, and use basic concepts with regard to project management and project methodology

Course content

The course comprises 15 credits and includes a major project in which students work on a case study in their specialisation. The students will be trained in engaging in interdisciplinary work with research articles, public agency reports and their own interviews. The course includes short components interspersed throughout the course to provide students with tools for the case study. The different case studies will enable students to analyse the impact on the environment of social changes at the regional level. An example of a change is the large-scale transition to biofuel production in a region. The project work takes place in groups of 3-4 students, but each student will write an individual report. The work on the case study will include: collection of facts, analysis of scientific reports, interviews with people in the industry and in different public authorities. The students will be trained in report writing through regular meetings with supervisors and course leaders. Furthermore, the students will be trained in problem-solving skills and written and oral communication of findings.

The course also contains short components enabling the students to practise specific skills to be used in the work on the case study. The components in question deal with project management, statistical methods, energy balance calculations and basic environmental economics for students who have not studied these topics previously.

Course design

The teaching consists of lectures, exercises and independent work. Participation in exercises is compulsory.

Assessment

The assessment is based on the written case study report.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass, Pass with distinction.

For a grade of Pass on the course as a whole, the student must have passed the case study report and exercises. For a grade of Pass with Distinction on the course as a whole, the student must have been awarded this grade on the case study report and passed the exercises.

Entry requirements

To be admitted to the course, students must have 90 credits in science courses and passed MVEN03 Environmental Science: Analysis and Methodology, 15 credits, and a Bachelor's degree project

Further information

The course may not be included in degree together with MVEN04 Applied Environmental Science, 15 credits.

Subcourses in MVEN14, Environmental Science: Applied Environmental Science

Applies from H09

0901 Applied Environmental Science, 15,0 hp
Grading scale: Fail, Pass, Pass with distinction