



LUND
UNIVERSITY

Faculty of Science

MVEC20, Environmental Science: Industrial Environmental Economics, 15 credits

*Miljövetenskap: Industriell Miljöekonomi för miljövetare, 15
högskolepoäng*
First Cycle / Grundnivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2020-06-12 to be valid from 2020-06-12, spring semester 2021.

General Information

The course is an elective first-cycle course for a degree of Bachelor of Science in Environmental Science.

Language of instruction: Swedish

Main field of studies

Environmental Science

Depth of study relative to the degree requirements

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

Learning outcomes

The course highlights environmental work in society from two distinct perspectives: seen from the perspective of the industrial organisation, which acts to organise itself in a suitable way to achieve as much environmental results as possible with limited resources, and the perspective of the socioeconomic actors, with their role to value and create incentive for the industrial environmental work. This is applied in the project work carried out by the participants. The course has an applied format and analysis of different actors' perspectives constitutes a central aim.

Knowledge and understanding

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

- give an account of strategies in industrial environmental work, and basic functions for environmental work in an organisation, from a technology, process and product perspective

- ?give an account of the role of socioeconomics in the environmental policy, and give an account of fundamental concepts in environmental valuations and socioeconomic analysis

Competence and skills

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

- independently provide arguments for, and present different strategies to, industrial environmental work
- search, compile, and critically evaluate and interpret relevant information to design an environmental management system for a smaller organisation
- structure and analyse industrial environmental problems from an actor perspective
- independently identify, formulate, plan, and carry out an applied project within given time frames
- discuss the role of socioeconomics as decision basis in environmental policy, and limitations for environmental economic calculations from the perspective of long-term sustainable development

Judgement and approach

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

- reflect on her/his possibilities to promote industrial environmental work
- reflect on her/his need of additional knowledge to be able to work with industrial environmental work and socioeconomics

Course content

The course aims to provide skills in a systematic approach to manage environmental problems linked to industrial activities. The main focus is to understand how processes, products and organisation/management result in environmental problems, which tools and strategies that can be used to work with sustainable solutions efficiently, and how socioeconomic analysis contributes to create incentive for the companies.

The course includes three, partly overlapping, modules:

- Industrial environmental work (4.5 credits) including basics in cleaner technology, environmental management in industrial organisations, construction of environmental management systems for systematic environmental work, and an introduction to life-cycle analysis and basics in strategies for cleaner products.
- Socioeconomic analysis (4.5 credits) including basics in market and socioeconomic analysis, environmental valuations and socioeconomic calculations in environmental policy, the link between socioeconomics and environmental management in industry, and the limitations of the neoclassical economy from a sustainable development perspective.
- Project work (6.0 credits) where knowledge is applied on current environmental problems, in a company or as a case study. Interviews with actors relevant for the project constitute a part of the information retrieval. When projects are carried out in collaboration with a company, e.g. via Miljöbron, such project is presented also for the company.

Course design

The teaching consists of lectures, exercises, seminars and project work, and has a high

level of student interaction. The course is carried out in the following order:

- Industrial environmental work; lectures, exercises, assignments.
- Socioeconomics; lectures, seminars, exercises.
- Project work; normally carried out in groups.

Participation in seminars, exercises, assignments and presentations is compulsory.

Assessment

The examination consists of two written examinations, one on the module dealing with industrial environmental work, and one on the module dealing with socioeconomic perspectives on environmental problems, and also a project work carried out in groups. The two written examinations are carried out during the course, and the projects are presented and discussed at the end of the course.

For students who have not passed the regular examination, an additional examination in close connection to this is offered.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

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.

The grades on the modules are Failed, Passed. To pass the entire course, approved examinations, approved written assignments, approved project report, oral presentation and critical review, are required. The final grade (Failed, Passed or Passed with Distinction) is decided through a joint assessment of the results of the examinations and the project work.

Entry requirements

To be admitted to the course, 75 credits in science courses are required, including MVEA01 Environmental Science: Basic Course, 15 credits, and MVEC18 Law in Environmental Studies, 15 credits.

Further information

The course may not be included in a degree together with MVEC14 Industrial Environmental Economics.

Subcourses in MVEC20, Environmental Science: Industrial Environmental Economics

Applies from V21

- 2101 Industrial environmental management, 4,5 hp
Grading scale: Fail, Pass
- 2102 Economics for environmental policy, 4,5 hp
Grading scale: Fail, Pass
- 2103 Project module, 6,0 hp
Grading scale: Fail, Pass