



LUND
UNIVERSITY

Faculty of Science

MVEA10, Environmental Science: Basic Course, 15 credits *Miljövetenskap: Grundkurs, 15 högskolepoäng* First Cycle / Grundnivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2021-02-04 and was last revised on 2021-02-05. The revised syllabus applies from 2021-02-05, autumn semester 2021.

General Information

The course is a compulsory 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

G1N, First cycle, has only upper-secondary level entry requirements

Learning outcomes

The aims of the course are (i) to give an introduction to basic scientific principles to understand environmental and climate change issues, with special focus on sustainable development, and (ii) to give an introduction to national and global environmental and sustainability goals, and control and decision regarding environmental, climate-related and sustainability issues.

Knowledge and understanding

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

- describe key concepts in environmental science and how these are based on scientific principles
- explain the causes of environmental and climate change based on basic scientific principles and models
- describe the consequences of environmental and climate change for sustainable development

- describe how policy instruments and decisions can be applied to adapt to a sustainable societal development

Competence and skills

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

- carry out data collection and literature surveys in environmental science
- master simple statistical models and the most common databases for analysis of environmental data
- present information, problems and solutions in the field of environmental and climate change, orally and in writing
- carry out assignments within given time frames

Judgement and approach

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

- critically discuss environmental and climate issues considering relevant scientific, societal and ethical aspects by evaluating and analysing the implications of a sustainable development
- independently evaluate her/his knowledge need, and take responsibility to acquire additional knowledge in environmental science
- assess aspects on environmental and climate issues in society and people's responsibility for how they are used

Course content

The course consists of five themes:

- environmental policy and sustainable development
- ecosystems and natural resources
- biogeochemical cycles and natural resources
- strategic environmental work and ecotoxicology
- climate, energy and environment.

Within each theme, the students are trained in:

Scientific working methodology:

- statistics and data processing,
- interview and questionnaire methodology,
- delimitation of problem areas,
- information retrieval,
- presentation of information about environmental issues and
- compilation and transfer of information about environmental problems, orally and in writing.

Basic theory:

- sustainable development,
- processes in soil, air and water and how these influence the conditions for human activities
- climatological cycles and geological processes,
- anthropogenic use of natural resources.
- common environmental problems and potential solutions, in Sweden and globally.

Course design

The teaching consists of lectures, exercises and field trips. The exercises are carried out in PBL groups where the students work with environmental and climate issues. Individual feedback is frequently given on individual reports and presentations that are assessed. Learning reflections are included in the individual examinations. In addition, the students carry out exercises in basic computing and statistics and social science methodology, e.g. interview and questionnaire methodology.

Participation in exercises, field trips and associated parts is required.

Assessment

Examination takes place during the course in the form of individual written assignments and written and oral presentations in groups.

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.

To pass the entire course, approved individual written assignments, exercises and presentations in groups, and participation in compulsory parts, are required.

The final grade is determined by a combined assessment of the individual written assignments, as these are based on progression against the intended learning goal. The grade is an aggregation of these and other completed compulsory assignments and exercises.

Grades awarded on exercises and written assignments carried out in groups are Failed and Passed, and grades awarded on individual written assignments are Failed, Passed and Passed with distinction.

Entry requirements

General and courses corresponding to the following Swedish Upper Secondary School Programs: Biology 2, Chemistry 2, Mathematics 4, Physics 1b/1a1+1a2.

Further information

The course may not be included in a degree together with MVEA01 Environmental Science, Basic Course 15 credits.

Subcourses in MVEA10, Environmental Science: Basic Course

Applies from H21

- 2101 Individual assignments, 10,0 hp
Grading scale: Fail, Pass, Pass with distinction
- 2102 Exercises, excursions and group assignments, 5,0 hp
Grading scale: Fail, Pass