



DEPARTMENT OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES

ES2611 Environmental Management Systems, 15 credits

Miljöledningssystem, 15 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Faculty of Science on 2011-10-25 and was last revised on 2024-03-15 by Department of Biological and Environmental Sciences to be valid from 2025-01-20, spring semester of 2025.

Field of education: Science 100%

Department: Department of Biological and Environmental Sciences

Position in the educational system

The course is included in the Master program in Environmental Sciences, but can also be included in other Master and Bachelor programs. The course can be chosen as a freestanding course. The course is at Second cycle level in Environmental science.

Main field of studies

Environmental Science

Specialization

A1N, Second cycle, has only first-cycle course/s as entry requirements

Entry requirements

120 HEC of which at least 30 HEC in environmental science courses, or equivalent. Applicants must prove their knowledge of English corresponding to English 6/English B from Swedish upper secondary school. For more information, see English language requirements on Universityadmissions.se.

Learning outcomes

The student should acquire knowledge about Environmental management systems, and competence about how they can be implemented in practice. Furthermore, both strategies and measures for organizations to improve its environmental performance, in the framework of environmental management systems, are addressed mainly from an

applied perspective. The students should also have good knowledge about methods for communicating, like the Global reporting initiatives (GRI) and so called Environmental statements, and be familiar with closely related systems, like e.g. Quality Management systems.

For an approved course, participants must have extensive knowledge of: relevant documents and regulations in the field of environmental management systems, including ISO14001 and EMAS, how environmental management systems are implemented in practice in different types of organizations, measures for organizations to improve their environmental performance, the most internationally accepted ways for organizations to communicate their environmental/sustainability work in written form, weaknesses and strengths of today's environmental management system in theory and in practice. In addition, the participants must also know how an audit is carried out, how an interview is best carried out in connection with an environmental audit, and be familiar with other closely related management systems. In addition, the student must have knowledge of how an organization can use different forms of environmental labeling, and methods for quantifying the organization's climate impact.

The student must achieve a competence to introduce an environmental management system, especially to be able to:

- carry out an environmental investigation, including assessment of risks and opportunities, as well as a interested party analysis
- formulate an environmental policy
- formulate environmental objectives with an associated action plan
- write procedures for operational control of practical issues (waste, chemicals, etc), or for operating the environmental management system
- to plan an internal environmental audit
- to be able to discuss the advantages and disadvantages for a certain organization of introducing an environmental management system
- The student must be able to discuss the weaknesses and strengths of today's environmental management system, both in theory and in practical application. In addition, he/she should be able to formulate pros and cons for a certain organization to introduce such a system.
- The student must also be able to analyze the environmental benefits delivered by an environmental management system from a cost-effectiveness point of view. The student must have an understanding of ethical aspects that may arise in connection with environmental audits.

The course is sustainability-related, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria.

Course content

The course aims to enable students to assimilate the theory of Environmental Management Systems, as well as learn how to appropriately introduce an environmental management system in different types of organizations. The students should be made aware of how environmental management systems are used both in Sweden and internationally, and be able to critically discuss the pros and cons of these systems, and how they could be improved. The course consists of four main parts*; i) lectures by external experts; ii) theory; iii) method exercises, and iv) project work, usually in groups, with real organizations, e.g. small and medium-sized enterprises or public organizations. In addition, students should also acquire knowledge of how organizations can practically work to reduce their environmental impact, together with strategies and methods for running and communicating an offensive environmental/sustainability work, including activities such as environmental labeling and methods to quantify an organization's climate impact.

The student deliver a project report, consisting mainly of an environmental review for a real company or an organization, together with a number of other sub-tasks of environmental management systems. The project is in most cases performed group wise. If there is no access to a company/organization, the project work is carried out with authentic examples formulated by the teacher. The student must be well versed in the areas of environmental labeling and methods for quantifying and reporting an organization's climate impact.

The course consists of three formal parts:

- 1) **Mandatory elements**, which consists of lectures with external experts, as well as method exercises. Mandatory parts are marked in the schedule. Students who do not participate in a certain mandatory part of the course are required to submit a written summary of the content of this part in order to be approved for the course (3 HEC).
- 2) **Exam** in written form (class writing) on theoretical parts (4.5 HEC).
- 3) **Project**, including a written report and a short oral presentation at a seminar (7.5 HEC).

*) i) and iii) in the text above constitute subpart 1), ii) corresponds to subpart 2), and iv) corresponds to subpart 3)

Form of teaching

Traditional lectures, exercises/seminars with active student participation and in some cases with a written submission, as well as a project work that is carried out in groups, and is presented both in writing and orally.

Language of instruction: English

Assessment

In order to pass the course, the student must receive Pass on all three subparts.

A student who has failed a test twice has the right to change examiners, if it is possible.

A written application should be sent to the Department.

The number of examinations is limited to five occasions.

The course includes 3 forms of examination: Mandatory elements, which require attendance and in some cases written submission (3 HEC), written exam (4.5 HEC) as well as a written report and a short oral presentation of the project work (7.5 HEC).

If the course is discontinued or major changes have been made, the student is guaranteed at least three examination occasions (including the ordinary examination occasion) during a time of at least one year from the last time the course was given in the original form.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

The grading scale comprises Fail (U), Pass (G) and Pass with Distinction (VG).

For the compulsory elements only U and G are given. In order to be awarded G for the whole course of 15 HEC, G is required on all three subparts. For VG on the whole course, either VG is required on both subparts, Exam and Project, or if a weighted total score on the two subparts, Exam and Project, exceeds 80% of the maximum weighted points. The Exam is weighted by a factor of 0.67 and the Project by 0.33.

Course evaluation

At the end of the course, a written evaluation is carried out. The results of the evaluation will be communicated to the students via Canvas and will serve as a guide for the development of the course.