



Course syllabus

Miljövetenskap Environmental Technology

FMIA01, 4 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED W

Date of Decision: 2023-03-27

General Information

Compulsory for: IBYA1, IBYI1, IBYV1

Language of instruction: The course will be given in Swedish

Aim

After passing the course, the student should have gained an understanding of how societal activities affect the environment and how environmental problems can be mitigated, in particular from the perspective of the sectors of construction and infrastructure building. Also, the student should be encouraged to take part in a discussion regarding the particular responsibility of the engineer in relation to sustainable development.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- Be able to describe some important environmental and resource problems.
- Be able to identify and describe actual or potential environmental problems within the fields of construction and infrastructure building.
- Be able to relate different environmental problems to the different phases of a construction or infrastructure project in a lifecycle perspective.
- Be able to describe the basic societal framework of environmental protection, e.g., legislation and policy instruments.
- Be able to describe how environmental protection can be organised and pursued in industry and organisations.

Competences and skills

For a passing grade the student must

- Be able to write a well-structured report with a correct language, and a satisfactory use of relevant sources.
- Be able to independently gather and process information within the framework of a minor project work

Contents

The principles of the concept of sustainable development. The principles behind the emission and dispersion of pollutants. Important environmental problems related to the energy and resource needs of the modern society.

Environmental work/activities in industry: cases and principles. Fundamentals in environmental legislation.

Construction and infrastructure projects in a lifecycle perspective: materials and resource use; environmental and health risks relevant to materials use; waste handling; etc. The relative contribution of the construction/infrastructure sector to environmental problems.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: Attendance at discussion seminars and potential study visit is mandatory. A minor group project is to be presented orally and in writing, and the project report must fulfil basic formal criteria. The final grade is decided by the result of the written exam.

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.

Admission

The number of participants is limited to: No

The course overlaps following course/s: FMI640, FMIF15, GEMF01, FMI031, FMIF01, FMIF05, FMIF10, FMIF20, FMIF35, FMIF45

Reading list

- Ammenberg, J & Hjelm, O (red.): Miljöteknik - för en hållbar utveckling. Studentlitteratur, 2013, ISBN: 978-91-44-09275-1.
- The reading list is established each year. The course literature this year consists of the book mentioned above. Changes in course literature will be communicated at least eight weeks before start of the course.
- Scientific papers, statistics, case studies etc.

Contact and other information

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Course homepage: <http://miljo.lth.se>