



LTH

FACULTY OF
ENGINEERING

Course syllabus

Miljövetenskap med miljökemisk profil Environmental Science, Especially Environmental Chemistry

FMIF50, 6 credits, G2 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED W

Date of Decision: 2023-03-27

General Information

Main field: Technology.

Compulsory for: V2

Language of instruction: The course will be given in Swedish

Aim

The general aim of the course is that the students should acquire fundamental knowledge about environmental problems and environmental science related to civil engineering. The students should also be inspired to discuss the role and responsibility of civil engineers in the development of an environmentally sustainable society.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to describe some fundamental environmental problems from a chemical and physical starting-point.
- be able to discuss the connections between indoor environment and health
- be able to explain the role of civil engineers in the creation and prevention of environmental problems in different construction projects.
- be able to present examples of solutions to environmental problems; technical solutions as well preventive work such as legislation and policy instruments.

Competences and skills

For a passing grade the student must

- be able to acquire the skill to write short, well structured reports with proper references
- be able to search independently for relevant literature and be able to value the references
- be able to identify this/her need of further knowledge

Judgement and approach

For a passing grade the student must

- be able to identify relevant issues concerning environmental ethics

Contents

The course is largely conducted using Problem Based Learning (PBL) and after the course the students should be able to discuss the role and responsibility of civil engineers in the development of an environmentally sustainable society. The students should also be able to preside at a discussion meeting.

Lectures are given on environmental problems related to the use of natural resources and energy use in industrial society; environmental concepts. Basic environmental chemistry and ecotoxicology. Chemical processes in air, ground and water. Environmental impacts from construction projects in ground and water. Indoor environment: choice of material, ventilating system. Environmental legislation, regulation and policy instruments. Environmental ethics.

Examination details

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

Assessment: A written exam. Active participation in the PBL-sessions and two written reports as well as refereeing reports from fellow students. The final grade is based on 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.

Parts

Code: 0117. **Name:** Reports.

Credits: 2. **Grading scale:** UG. **Assessment:** Approved PBL reports

Code: 0217. **Name:** Examination.

Credits: 4. **Grading scale:** TH. **Assessment:** Written exam

Admission

The number of participants is limited to: No

The course overlaps following course/s: FMIF15, FMI100, GEMF01, FMIA01, FMIF01, FMIF05, FMIF10, FMIF20, FMIF35, FMI031

Reading list

- Due to the Problem Based Learning methodology there is no mandatory literature.
- Programledning V: Anvisningar för rapporter på V-programmet. 2015. Available on the programme's website.

Contact and other information

Course coordinator: Eva Leire, eva.leire@miljo.lth.se

Course administrator: Petra Malmquist, petra.malmquist@miljo.lth.se

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

Further information: PBL-occasions are mandatory.