

Course syllabus

Avfallshantering och resurshushållning Waste and Resource Management

FMIN55, 7,5 credits, A (Second Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED W

Date of Decision: 2023-02-13

General Information

Elective for: W4-ms

Language of instruction: The course will be given in Swedish

Aim

The aim of the course is that students should acquire a holistic view on solid waste, waste management and resource management from a systems perspective. The students should learn to reflect on the connection between consumption, the generation of solid waste, the environmental impact of solid waste, and different policy instruments and their effects. The aim is also to integrate knowledge of resource management with previously acquired knowledge. The student shall also practice problem formulation, critical thinking, and written and oral communication.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to state how solid waste is generated, explain different methods for waste treatment and the environmental impact of waste and waste management.
- be able to describe and discuss the Swedish legislation and policy instruments within the field of waste management.
- be able to analyse the waste management in relation to Sweden's environmental objectives and EU directives.

- be able to analyse and discuss consumption aspects, from an individual perspective, in connection with resource management.

Competences and skills

For a passing grade the student must

- be able to formulate a research aim which is based in a problem that is relevant for the course, which is treated in a paper.
- be able to gather and critically assess information.
- be able to write a well-structured paper (in group) with proper language and referencing.
- be able to defend the paper orally and be opponent of another paper.

Judgement and approach

For a passing grade the student must

- be able to evaluate different waste management methods and policy instruments from a sustainability perspective.

Contents

The course consists of the following:

- Lectures and seminars that deal with different types of solid waste, resource management, waste prevention, recycling systems, treatment methods, legislation, producer responsibility, and international perspectives on waste management.
- Study visits which aim to give practical knowledge about different steps of the waste management chain.
- A written paper that intends to deepen the knowledge within a delimited field of solid waste management.
- A written exam which is based on the course literature, lectures, study visit and seminars.

Examination details

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

Assessment: A written exam and a written paper including an approved opposition. For the paper to be graded, the course director should have been able to follow the writing process. Participation in seminars and study visits is mandatory. The final grade is based on the written exam and the individual paper and seminar on a 50/50 basis.

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: 0122. **Name:** Examination Part 1.

Credits: 4,5. **Grading scale:** TH. **Assessment:** Approved written exam, and participation in study visits and seminars.

Code: 0222. **Name:** Examination Part 2.

Credits: 3. **Grading scale:** TH. **Assessment:** Approved paper and opposition.

Admission

Admission requirements:

- Minimum 120 ECTS credits. Minimum of 6 ECTS credits should be within environmental studies or sustainable development

The number of participants is limited to: No

The course overlaps following course/s: FMI040

Reading list

- Att göra mer med mindre. Nationell avfallsplan och avfallsförebyggande program 2018-2023. Rapport 6857, 2018. Naturvårdsverket.
- Avfall i Sverige 2018, Naturvårdsverket, Rapport 6932.
- Svensk avfallshantering 2020. Årsskrift från Avfall Sverige, Malmö, 2021.
- Kurslitteraturen omfattar dessutom rapporter och aktuella vetenskapliga artiklar. Litteraturlistan upprättas vid institutionen och uppdateras inför varje kursstart.

Contact and other information

Course coordinator: Mikael Lantz, mikael.lantz@miljo.lth.se

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

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