



Course syllabus

Hållbar utveckling med brandingenjörsperspektiv Sustainable Development from a Fire Protection Engineering Perspective

FMIA05, 7,5 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: BR1

Language of instruction: The course will be given in Swedish

Aim

The aim of the course is to give the students basic knowledge on the concept of sustainable development, and about the sustainability problems that are relevant for fire protection engineering and the work of the rescue services. The course shall give strategic knowledge in order to meet future environmental requirements and sustainability challenges.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- Be able to present an overview of the important environmental and resource issues related to rescue services and the prevention of accidents.
- Be able to analyse critically the concept of sustainable development.
- Be able to describe and discuss some basic concepts within environmental legislation and other policies, with a focus on rescue services and the prevention of accidents.

- Be able to describe and discuss environmental and sustainability challenges related to fire protection and rescue services.

Competences and skills

For a passing grade the student must

- Show ability to produce information for effective measures with a sustainability perspective.
- Be able to write a well structured, concise report in a groups, with correct referencing and language, and in doing this collect and critically evaluate information with the public as a target group.
- Be able to communicate orally and discuss independent analysis in the subject area.

Judgement and approach

For a passing grade the student must

- Show an ability to make assessments within the area of rescue services in relation to relevant sustainability aspects

Contents

Fire protection engineers work in many areas with significance for the environment and sustainable development. It can be both environmental effects of fires and fire protection measures, sustainability aspects related to the prevention of accidents, and evaluation of sustainability (e.g. through climate declarations) of fire protection measures in buildings. Increasing sustainability requirements in all sectors of society leads to challenges to reduce the environmental impact in the area of rescue services. Furthermore, the legislation on protection against accidents (2003:778) requires that the rescue services should protect the environment.

The course consists of lectures and seminars that deal with important strategic environmental problems such as climate change, air quality, resource use and environmental toxins. The concept sustainable development is covered from a natural science perspective, as well as from a societal and business perspective. Also, the most important environmental and sustainability challenges related to fire protection and rescue services, are covered, including the preventive work of the rescue services and its capacity for sustainable accident management.

Examination details

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

Assessment: An exam as well as mandatory assignments and seminars must be passed.

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:** Sustainable Development from a Fire Protection Engineering .

Credits: 4. **Grading scale:** TH. **Assessment:** Written exam. **Contents:** This part consists of literature studies, lectures and seminars.

Code: 0222. **Name:** Home Assignment.

Credits: 3,5. **Grading scale:** UG. **Assessment:** Approved home assignment and active participation in seminars. **Contents:** This part consists of home assignments that are done either individually or in group, as well as related seminars

Admission

Assumed prior knowledge: Basic courses taken during the first semester of the programme.

The number of participants is limited to: No

Reading list

- Ammenberg J., Hjelm O.: Miljöteknik - för en hållbar utveckling. Studentlitteratur. Latest edition. Due to quick development in this field the literature may be changed; this will be communicated at least 8 weeks before start of the course.
- Kurslitteraturen omfattar dessutom rapporter och aktuella vetenskapliga artiklar. Litteraturlistan upprättas vid institutionen och uppdateras inför varje kursstart.

Contact and other information

Course coordinator: Per Svenningsson, per.svenningsson@miljo.lth.se

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

Course coordinator: Max Åhman, max.ahman@miljo.lth.se

Further information: In group work an active participation is required. Each group member shall individually be able to present and answer for the contents. If a group member does not fulfil the requirements of the other members on active participation, a decision can be made by the examiner of replacement to another group or a failed grad.