AL1145 Strategies for Sustainable development 3.0 credits

Strategier för hållbar utveckling

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

On 05/10/2021, the Dean of the ABE School has decided to establish this official course syllabus to apply from autumn term 2023, registration number A-2021-1767.

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

The course AL1351 ”Energy, climate and Sustainable development” from the first year in the engineering programme in energy and environment (CENMI).

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The overall aim of the course is that the students should develop proficiencies and knowledge of how central sustainability problems related to the material and energy use of the society can be handled. This will be achieved by training the students in applying, analysing and assessing the suitability and relevance of different strategies to tackle different types of sustainability problems. Strategies will in this course be approached in the interplay between market, technology and policy, and how different actors are influenced. After passing the course, the students should be able to:

- Explain how different strategies and measures can be used to address sustainability problems related to the material and energy use of the society, and discuss how the strategies relate to one another.
- Describe and discuss how different factors such as the market, innovation and policy interacts to solve sustainability problems.
- Apply the knowledge above by critically analysing and evaluate organizations sustainability strategies and approaches.
- Identify and delimit problems and suggest well justified strategies and measures that improve the sustainability performance of products, processes or services.
- Discuss and analyse sustainability-related problems and strategies together with other students, present in writing and provide arguments for your conclusions.

Course contents

The course covers both end-of pipe strategies and preventive strategies to decrease the environmental impact from the material and energy use of the society.

The teaching consists of lectures, seminar and project work. In the course start, students choose a case in the form of a product, process or service with a considerable potential for improvement. This case will be followed throughout the course in a focused project work to analyse how the product can be developed in a more sustainable way through different strategies.

The strategies will be presented through lectures and associated literature. After the lectures, the students will work with their cases related to the strategies. During the course, supervision and seminars are offered.

The course ends by completing and presenting a project report and completing an individual reflective assignment.

Examination

- SEM1 - Seminars with associated assignment, 0.5 credits, grading scale: P, F
- PRO1 - Project assignment, 2.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

In addition to the compulsory examination activities, attendance and active participation at seminars are required as well as completing written assignments associated to the seminars.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.