



SD2250 Sustainable Vehicle Design 7.5 credits

Hållbar fordonsdesign

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

Establishment

The course syllabus is valid from Spring 2022 according to the school principal's decision: S-2022-0529 Decision date: 2022-02-24

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Technology

Specific prerequisites

Completed degree project at Bachelor's level with a major in technology.

English B / English 6

Language of instruction

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

Intended learning outcomes

After completing the course, the student should be able to:

- Describe the main challenges faced in realising sustainable transport vehicles and explain the key global drivers and barriers behind transitioning to these.
- Reflect on the advantages and disadvantages of different modelling approaches, assessment methods, and design theories relevant to the design of sustainable vehicles and motivate the choice for given approaches.
- Perform benchmark simulations and assessment calculations and evaluate the results.

Course contents

The course contains various aspects of designing sustainable vehicles, including requirements for a sustainable future; agents and actions; systems, complexity and modelling; the transport system; moving to a circular economy; strategies for sustainable product development; environmental assessment and design; vehicle design and technology; resolving functional conflicts.

Examination

- INL1 - Assignment and written report, 4.5 credits, grading scale: P, F
- PRO1 - Project report and oral and written presentation, 3.0 credits, grading scale: A, B, C, D, E, FX, 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.

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.