



MJ2415 Project in Energy Systems Analysis 12.0 credits

Projekt i energisystemanalys

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

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

Establishment

Course syllabus for MJ2415 valid from Autumn 2015

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Bachelor's degree (BSc) or the equivalent

Language of instruction

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

Intended learning outcomes

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

- design a system from a given problem description.
- carry out analyses of energy systems, from the primary energy sources to the energy services. This implies that the student should be able to:
 - i) define appropriate system borders for the energy systems that should be analysed.
 - ii) carry out thermodynamic and economic analyses of energy systems and analyse its environmental impact.
 - iii) from completed analyses make an overall assessment of the analysed system, regarding energy transformation, economics and environmental aspects.
- carry out a general commercial analysis of the intended product or the service that the project are thought to result in.
- describe and analyse the relationships between technical and commercial viability.
- use basic models of customer and market analysis.
- develop and explain the need for the developed product or service.
- develop a business model and a business plan.

Course contents

Project work within energy and environmental technology including economics, business and entrepreneurship

Course literature

Varying depending on the project assignment

Examination

- PRO1 - Written Final Report and Oral Presentation, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO2 - Written Final Report and Oral Presentation, 7.0 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.

Written part and final report and two oral presentations

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.