



MJ1403 Energy Technology 6.0 credits

Energiteknik

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

Establishment

Course syllabus for MJ1403 valid from Spring 2009

Grading scale

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

Education cycle

First cycle

Main field of study

Mechanical Engineering, Technology

Specific prerequisites

4A1112/MJ1112 Applied Thermodynamics or equivalent course should have been completed

Language of instruction

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

Intended learning outcomes

This course is meant to give an insight in the field of energy technology. After finished course the student should be able to:

- Explain different expressions and parameters, which define different parts in the field of energy technology
- Explain the principles of the different methods of energy conversion and be able to place these into typical contexts
- Name the different main components for some of the energy conversion methods and shortly explain the function of each component

Course contents

The course is an overview course and therefore it consists of many different parts that all are connected to the subject energy technology. By way of introduction, a number of important concepts from the thermodynamics are repeated, where different energy conversion processes, among other things, are brought up. Further the resources that exist for energy production are illuminated, both in Sweden and internationally, and which are the needs in the society. The environmental consequences of energy conversion, which laws and conventions control the pollution and how it is possible technically to limit the emissions, will be discussed. Finally some future perspectives will be given and alternative methods that can be used to improve the environmental values.

Examination

- PROA - Project, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- TENA - Examination, 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.