



ML1203 Energy Technology 6.0 credits

Energiteknik

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 ML1203 valid from Autumn 2012

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

Upon completion of this course, the student should be expected to do the following:

- describe and explain concepts in energy technology
- show the proficiency in fluid flow, hydromechanics, and heat transfer.
- explain and describe the methods for energy transfer between states of energy
- calculate heat transfer through media
- perform the calculations on fluid machinery such as pumps and fans
- provide examples of methods for storing energy
- sketch and interpret state diagrams
- narrate energy resources in a society perspective
- apply the concept of efficiency to energy processes

Course contents

- Forms of energy
- Work and losses
- Hydrostatics
- Fluid flow
- Bernoulli's equations
- Thermodynamics
- Turbomachinery
- Heat transfer
- Fans and pumps
- Combustion
- Processes of heating and cooling
- Thermodynamic diagrams of state
- Efficiency
- Methods for storing energy

Disposition

Lectures

Laboratory exercises

Course literature

G. Dahlvig: Energi, faktabok

Examination

- LAB1 - Laboratory Work, 1.5 credits, grading scale: P, F
- TEN1 - Written Examination, 4.5 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.

Other requirements for final grade

Approved written exam

Approved laboratory exercises and exercises

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.