Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Syllabus

FY0003.1 Thermodynamics, 4.5 credits

Termodynamik

The course is given as course independent of study programme

Syllabus discontinued 16 November 2006

Version 1 in Slukurs. Corresponds to version 1 in Ladok

Syllabus approved

28 October 2003

The version applies to students admitted from spring 2004 to autumn 2007

The version is not a module version

Subjects

Physics/Technology

Education cycle

First cycle

Modules

Title	Code	Credits
Single module	0101	4.5

Advanced study in the main field

Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

Swedish

Prior knowledge

The equivalent of: 6 Swedish University Credits (SUC) in Multidemensional calculus and 5 SUC in Mechanics.

Objectives

The course is essential for treatment of various energy processes. After examination the student will
- know basic concepts of thermodynamics, especially energy transforms
- have established understanding of transport of energy
- be prepared for subsequent courses with focus on technical applications of thermodynamics.

Content

The course contains the following properties and concepts: thermodynamic state variables and the laws of tehrmodynamics. The concepts of ethropy and exergy. Behaviour of ideal gases and kinetic gas theory. Diabatic and adiabatic processes. Phase shifts, steam power and temperature reduction processes. Heat transport and heat exchanger. Technical applications of cycling processes.

Implementation

Lectures and exercises approx. 40 h
Project excercise and presentation approx. 20 h
Examination/evaluation approx. 5 h

Examination

Requirements for examination

Written examination. Written and oral presentation of project work.

Passed examination and passed project including presentation.

- If the student fails a test, the examiner may give the student a supplementary assignment, provided this is possible and there is reason to do so.
- If the student has been granted special educational support because of a disability, the examiner has the right to offer the student an adapted test, or provide an alternative assessment.
- If changes are made to this course syllabus, or if the course is closed, SLU shall decide on transitional rules for examination of students admitted under this syllabus but who have not yet passed the course.
- For the examination of a degree project (independent project), the examiner may also allow the student to add supplemental information after the deadline. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Additional information

- The right to take part in teaching and/or supervision only applies to the course date to which the student has been admitted and registered on.
- If there are special reasons, the student may take part in course components that require compulsory attendance at a later date. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Responsible department

Department of Energy and Technology

Supplementary Information

Finalized by: Programnämnden för biosystemteknikprogrammet