MJ146X Degree Project in Sustainable Energy Engineering, First Cycle 15.0 credits

Examensarbete inom hållbar energiteknik, grundnivå

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

Establishment

Course syllabus for MJ146X valid from Autumn 2015

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Of the engineering programme established requirements to may start a degree project at the basic level. These be kravÃ¥terfinns in the programme syllabus.

Specific requirements for degree project in sustainable energy systems:

MJ1112 Applied Thermodynamics, 9 credits or the equivalent (completed)

ME1003 Industrial Economics, the 6 credits of basic course or the equivalent (completed)

Recommended: MJ1401 Heat transfer 6 credits, but not compulsory

Language of instruction

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

Intended learning outcomes

Apart from the of KTH's established aims for degree project for Bachelor's degree is kursspecifika aims according to the below.

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

- formulate problems and apply methodology in sustainable energy engineering to search and evaluate solutions.

- apply knowledge and skills that have been acquired during the education on problem within the energy engineering.

- plan his own work so that given goals are reached.

- analyse the need of scientific information, carry out information retrieval and evaluate the received information.

- present work in a written technical report with requirements of contents, structure and language.

- refer to sources, figures, tables and formulae in an established way in a report.

- write a rapportsammanfattning in English with correct using the terminology of the subject.

- carry out oral presentations with requirements of tidshÃ¥llning and clarity in language performance and illustrations.

- review and comment on a technical work and be able to respond to criticism on ones own work

- design a model, make assumptions and evaluate its validity and reasonableness through sensitivity analysis

Course contents

The course is carried out in project form, either individually or in groups of two technology students. The projects treat energy engineering problems that are commonly occurring in the society with a focus on sustainable solutions. The aim of the project is to integrate technology with requirements of sustainable social, economic and environmental development.

The teachers in the course, appropriate projects provide at the beginning of the course. The projects can be assignment from industry or from a research team, but the implementation takes place mainly at KTH. The teachers is also supervisor for the projects.

The work should be documented in the form of a written report. Normally, it is written in Swedish with an abstract in English. It is allowed to write the report in English.

Between- and final review include as compulsory parts. At the final review, the technology student should, apart from to alone present orally, also publicly discuss another project work. Further, written submissions of parts of the report are included during the course with contents as agreed with the supervisor.

Course literature

The students carry out alone literature search that is relevant to their respective project

Examination

- XUPP - Thesis Project, 15.0 credits, grading scale: P, 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.

XUPP- Examination assignment, 15 credits

Apart from the of KTH's established criteria to pass degree project for Bachelor's degree is kursspecifika criteria:

Implemented project work with agreed rapportinlÃ¤mningar, attendance on compulsory seminars, presentation on these and public discussion and supplementary qualification of final report.

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.