MJ248X Degree Project in Energy Systems Analysis, Second Cycle 30.0 credits

Examensarbete inom energisystemanalys, avancerad nivå

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

Establishment

Course syllabus for MJ248X valid from Spring 2022

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

To begin the thesis project, second cycle, requires:

- completed courses corresponding to at least 60 credits at the second cycle
- completed course in ”Scientific Research Methodology”
- able to demonstrate sufficient specific subject knowledge in relation for the chosen area for the thesis project

Language of instruction

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

Intended learning outcomes

- demonstrate knowledge and understanding of the scientific foundation and best practices for the chosen subject, as well as an advanced understanding in current research and development, and in-depth knowledge of methodology
- demonstrate the ability to search, gather and integrate knowledge and identify their need for additional knowledge, all with a holistic, critical and systematic work approach
- demonstrate the ability to identify, analyse, assess and handle complex phenomena, issues and situations also with limited information
- demonstrate the ability to plan and with adequate methods carry out qualified assignments within given time frames and to evaluate this work
- demonstrate the ability to orally and in writing in dialogue with different groups clearly account for and discuss his conclusions and the knowledge and the arguments that these are based on
- demonstrate the ability to make assessments considering relevant scientific, social and ethical aspects
- demonstrate the skills required to participate in research and development work, or to work independently in other qualified activities

Course contents

The Master programme is concluded with a degree project in which the student is expected to demonstrate ability to independently solve an engineering problem by using a broad spectrum of skills. The subject for the degree project can vary but it must contain significant technical contents, have a clear application within chosen field and, if applicable, contribute to sustainable development. Provided that the degree project satisfies the requirements above, as decided by the course coordinator or examiner, and provided that qualified supervision is provided throughout the degree project, the student can choose to carry out the degree project either at an academic department, within an industrial company, or at a consulting firm, in Sweden or abroad.

Examination

- XUPP - Thesis Project, 30.0 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.

Besides the established KTH criteria for passing a second cycle degree project, the course specific criteria are:

Concluded project work with agreed deliverables, attendance at compulsory seminars, presentation at these, public discussion and completion 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.