MJ2471 Research Project in Energy and Climate Studies 18.0 credits

Forskningsprojekt i energi- och klimatstudier

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

Establishment

Course syllabus for MJ2471 valid from Autumn 2012

Grading scale

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

Education cycle

Second cycle

Main field of study

Environmental Engineering, Mechanical Engineering

Specific prerequisites

Bachelor degree or equivalent.

Documented proficiency in english B or equivalent.

Energy and Environment MJ2413 or at least 9 ECTS in areas direct relevant to the project in question.

Language of instruction

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

Intended learning outcomes

Upon completion of the research project, the student should be able to:

• Formulate clear objectives that can be validated through appropriate scientific methods;

• Plan his/her own work appropriately to achieve the objectives;

• Assimilate related work in the field and link this to the task at hand;

• Employ a wide range of scientific tools and methods, either those that have been acquired previously or through learning new skills;

• Incorporate aspects related to sustainability, end-user or societal implications; and

• Communicate results, in both oral and written form, with due respect to clarity, accuracy, and effectiveness.

Course contents

The research project in Energy and Climate Studies course teaches the student to formulate and work with a research problem. The course can be seen as preparing for the more extensive degree project.

The course comprehends two steps:

- the first is to attend and in writing reflect upon five research seminars arranged at the department or in related areas (in agreement with the course supervisor), and

- the second is to formulate and complete a research project.

The written reflection of the research seminars shall highlight the lessons learned during the seminars in connection to the identified research problem. Hence, show how the knowledge gained from the seminars can be applied in the research project.

The student is expected to demonstrate independent mastery of a particular problem employing a wide variety of skills. A variety of topics are appropriate for a project, however the project must have significant technical components, have a clear link to the energy and climate studies field, and incorporate the sustainability dimension. Provided that a project meets these requirements, and under the condition that competent guidance/supervision is available for the student throughout the project period, the project may be carried out either in an academic environment (university, research institute, or equivalent) or in an industrial setting (power plant, energy consulting agency, or other industry/business).

The final results from the research project are expected to be presented orally as well as in a final written publishable research article or final report.

Course literature

Bestäms i projektets start, i enlighet med projektuppgiften.

To be defined in line with the project assignment.

Examination

- INL1 - Seminar Reflections, 2.0 credits, grading scale: P, F
- PRO1 - Research Project, 16.0 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.