



FMJ3413 Nexus and Climate Agenda in Energy Systems 6.0 credits

Nexus och klimatagendan i energisystem

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

Establishment

Course syllabus for FMJ3413 valid from Spring 2024

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

The students should have basic knowledge about energy systems issues related to supply and demand, as well as overall ideas about key issues in the global energy agendas. They should also be familiar with the interaction between the different parts of the energy system. The research topic that the PhD student is engaged with should be relevant to the course's scope and background. Good English capability in speaking and writing is required.

Language of instruction

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

Intended learning outcomes

After completing this course, the student should be able to:

1. Describe and develop basic energy systems and scenario analysis
2. Critically explain the role of energy policies for a low carbon and climate-resilient future in development contexts
3. Identify and demonstrate the links between climate, water, land use and energy systems
4. Explain and evaluate the perspectives on global climate change, including the role of national and international actors in setting development priorities

Course contents

In this PhD course, the following topics will be covered:

- Energy systems analysis (reference energy systems and scenario analysis);
- Role of energy policies in systems transformation; factors governing policy design, policy instruments and approaches (policy processes), policy assessment
- Basics of nexus assessment (links between climate, water, land use and energy);
- Energy systems and climate agenda - the role of national and international actors in setting development priorities

Examination

- INL1 - Home assignment, 6.0 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.

Other requirements for final grade

INL1 project report will build upon the active participation in three **compulsory** seminars where the students will present their preliminary findings in line with the ILOs.

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.