



FME3550 Sustainable Energy Transitions - Technology and Management Perspectives 7.5 credits

Hållbara energiomställningar - Teknik och managementperspektiv

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

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus applies from Spring semester 2024 according to ITM School decision on 2023-10-04, M-2023-1927.

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

PhD students with interest and documented fundamental knowledge in one or several aspects of sustainable energy transitions.

The course participants will be selected based on a motivation letter outlining their interest in the subject, previous knowledge and their merits (e.g. educational certificates).

The course aims for total 20 PhD students as participants.

Language of instruction

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

Intended learning outcomes

After completing the course, the student will be able to:

1. Demonstrate an understanding of energy systems today, integrated with energy storage and renewable energy.
2. Demonstrate the ability to assess sustainability of energy systems from both technology and management perspectives.
3. Demonstrate understanding of holistic appraisals of sustainable transitions of energy systems and energy-related industries.

Course contents

The course "Sustainable Energy Transitions – Technology and Management Perspectives" is an interdisciplinary PhD course package that offers doctoral students a training in technology and innovation management, sustainable business and entrepreneurship, as well as policy processes related to sustainable energy transitions. The course deals with the challenges and opportunities that drive transformations of energy systems and energy-related industries. This includes discussing the relevance of global challenges like climate change and sustainable development and analysing how they contribute to transformations of energy systems and industries.

The course brings together well-respected lecturers from industrial economics and management, energy engineering and social science at the Royal Institute of Technology KTH and invited guest lecturers from other institutions.

Examination

- INL1 - Assignment, 2.5 credits, grading scale: P, F
- SEM1 - Seminars, 5.0 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.

SEM1/Seminars: Active participation and discussion in seminars ,10 seminars over 5 days and 0.5 ECTS/serminar

INL1/Assignment: Compulsory paper writing- 4.000 words to be submitted until 4 weeks after the course has finished. The paper should focus on at least one area of the course that was discussed and incorporate at least one method that was presented at the course. The exact assignment task will be presented to the students at the start of the course.

Other requirements for final grade

The provided pre-reading must be read by the students prior to the course start. The students should be able to discuss the literature and the knowledge gained at the course seminars

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.