ME2086 Global Energy Markets and Systems in Transition 6.0 credits

Globala energimarknader och system i omvandling

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 for ME2086 valid from Autumn 2019

Grading scale

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

Education cycle

Second cycle

Main field of study

Industrial Management

Language of instruction

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

Intended learning outcomes

On completion of the course the students should be able to:

1. Analyze the structure of the global energy system
2. Critically discuss the mechanisms that drive systems transitions in relation to global energy markets and their implications
3. Evaluate theoretical concepts and current research from the field of industrial dynamics for managing technological and industrial change processes in relation to global energy markets
4. Write an analysis related to industrial and technological change and independently discuss problem formulations and their solutions to tackle complex change in global energy markets
5. Present results and conclusions based on a scientific investigation for different types of audiences

Course contents

The course treats the functioning of global energy systems. The course will deal with the relationship between the structure of the technical systems and their respective economic boundary conditions (market, pricing etc.), as well as the function and transformation of energy markets.

The course contains a series of lectures with an in-depth review and analysis of conditions and driving forces behind the transformation of the intertwined global energy system from the following perspectives:

- Socio-technical
- economic
- political
- institutional
- climatological

The course also offers insights into theories, concepts and tools from industrial dynamics to analyse global energy markets and technical changes in energy systems. These theories, concepts and tools will be applied in the group work.

Specific prerequisites

Achieved the requirements for a Bachelor's degree

ME1003 Industrial management, basic course completed.

Examination

- INL1 - Assignment, 3.0 credits, grading scale: A, B, C, D, E, FX, F

- SEM2 - Seminars, 3.0 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.

The course is examined through a written examination (take-home examination) and a project work (with seminars) with a focus on the ability to critically analyse and discuss the consequences of technical and industrial processes of change from economic, political, social and ethical aspects and to independently formulate and define problems to tackle complex processes of change by means of data from various types of sources.

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.