



MJ2410 Energy Management 6.0 credits

Energy Management

Course syllabus for MJ2410 valid from Spring 17

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

Grading scale: A, B, C, D, E, FX, F

Education cycle: Second cycle

Main field of study: Mechanical Engineering

Intended learning outcomes

The course aims at broadening the students' abilities to cope with analytic and strategic issues related to energy systems and management through systems thinking and modeling.

The students, after accomplishment of this course, will be able to

- Analyze the energy systems by applying the principles of system thinking
- Model large and complex energy systems methodologically
- Evaluate cost-effectiveness of energy systems by applying proper economic measures
- Describe the principles of environmental and ecological economics
- Explain the important factors to measure the overall sustainability of different energy mixes
- Understand the importance of business model innovation for diffusion of sustainable energy technologies.

Course main content

Main topics that will be covered in the course are:

- System analysis, systems thinking and Energy Systems
- Methods for evaluation of large and complex energy systems and Energy system modeling
- People's understanding about Energy and user behavior
- Energy Economics
- Energy portfolio sustainability management
- "Business logics in modern energy systems .

Language of instruction

Language of instruction is specified in the course offering information in the course and programme directory.

Eligibility

Bachelor of science degree. Preferably with knowledge in Applied Thermodynamics (example MJ1112, 9 ECTS) or corresponding.

Literature

Energy Management. Kompendium.

Energy Management compendium

Examination

- PROA - Project, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- SEM1 - Seminars, 1.5 credits, grading scale: P, F

Requirements for final grade

Project (PRO1; 4,5 ECTS)

Seminar (SEM1; 1,5 ECTS)