



MJ1150 Energy and Systems, Innovation and Entrepreneurship

10.5 credits

Energisystem, innovation, entreprenörskap

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 MJ1150 valid from Autumn 2019

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

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 student should be able to show that they can carry out an entrepreneurial journey by showing the ability to:

Analyse the knowledge gaps/challenges/problems of the future energy system (ILO 1)

Systematically evaluate existing, innovative business models that satisfy one of the relevant global sustainable development goals (ILO 2)

Develop an innovative energy-related business model (ILO 3)

Course contents

Through an integrated programme with lectures, individual studies, workshops, seminars and consultation sessions, the course includes:

- the foundations of innovation and entrepreneurship
- knowledge gaps, challenges and problems related to future energy systems
- different entrepreneurial business models from the real life
- systematic evaluation of existing innovative business models
- business models, Innovation and the Global Sustainable Development Goals
- uncertainty and scenario analysis

Specific prerequisites

MJ1112 Applied Thermodynamics, MJ1145 Energy system, MJ1520 Statistics and Risk Assessment and EI1120 Electrical Circuit Analysis for the Environment and Energy Program and KE1060 Material and energy balances (or the equivalent courses)

Course literature

Osterwalder, Business Model Generation. Litteratur runt innovationer och innovationsteori.

Fördjupad litteratur om systemanalys och system teori. Litteratur om energy policy och energimarknad

Litteratur meddelas vid kursstart

Examination

- PROA - Project 1, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- PROB - Project 2, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- PROC - Project 3, 6.0 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.

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.