



El2600 Innovation and Entrepreneurship in Electric Power Engineering 6.0 credits

Innovationsprocesser och entreprenörskap inom elkrafttekniken

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

Establishment

The official course syllabus is valid from the autumn semester 2022 in accordance with the decision from the head of school: J-2022-0527. Decision date: 2022-03-08.

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Electrical Engineering

Specific prerequisites

Language of instruction

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

Intended learning outcomes

After passing the course, the student shall be able to

analyse the evolution of the existing electrical power system and the processes behind the key inventions and their development into innovative products that are now well-established

analyse the impact different stakeholders such as regulators, utilities, manufacturers and end customers have on the market for products and services in the field of electric power engineering

analyse the impact of the electricity price on investments in the electrical power grid

analyse how sustainable development creates incentive for innovation and entrepreneurship in the field of electric power engineering

describe how improvements in material properties, computational models etc affects innovation processes

identify key technological innovations and development in other areas that leads to innovations in the field of electric power engineering

describe the necessary steps that needs to be taken in order to place a new or improved product on the market.

develop a simple business plan

describe the process of patenting an invention.

Course contents

- The main content of the course is techniques for analyzing innovation processes related to the development of an idea or invention into a commercially viable product or service.
- The main focus in the course is to analyse the innovation process surrounding a number of successful and less successful development projects in the field of electric power engineering
- The taught techniques for analyzing the innovation processes are then applied to some specific cases with a non-obvious market potential.

Examination

- SEM1 - Seminars, 1.5 credits, grading scale: P, F
- INL1 - Assignment 1, 1.5 credits, grading scale: P, F
- INL2 - Assignment 2, 1.5 credits, grading scale: P, F
- INL3 - Assignment 3, 1.5 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

Approved assignments (INL1, INL2 and INL 3). Presenting and participating in the joint seminar (SEM1).

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.