



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.

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

Establishment

Course syllabus for El2600 valid from Autumn 2014

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Electrical Engineering

Specific prerequisites

Requirements needed to be accepted to the Master's Program, Energy Innovation TIETM

Language of instruction

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

Intended learning outcomes

After completion of the course the student should be able to:

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

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

analyse the impact of the electricity price on investments.

describe how improvements in material properties, computational models etc affects the innovation process.

identify key technological inventions and development in other areas that leads to innovations in the electric power area.

describe the necessary steps that needs to be undertaken 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 on techniques for analysis of the innovation process for development of an idea or invention to a commerciable product or service.

The main focus in the course is to analyse different innovation processes from particular success and non-success development projects in the area of electric power engineering.

The taught techniques for analysis of the innovationprocess is then applied to particular cases with a non-obvious market potential.

Disposition

The course is organised around three assignments (INL1, INL2 and INL 3). Each assignment has a number of lectures that provides the student with the necessary background and presents fundamental aspects around different key techniques for analysing and performing innovation processes.

Every student has to present the analysis of a particular case in a seminar (SEM1).

Course literature

Kurslitteratur bestäms senast fyra veckor innan kursstart.

Examination

- 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
- SEM1 - Seminars, 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.

Other requirements for final grade

Approved assignments (INL1, INL2 and INL 3). Presenting and participation 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.