



ED225X Degree Project in Fusion Plasma Physics, Second Cycle 30.0 credits

Examensarbete inom fusionsplasmafysik, avancerad nivå

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

Establishment

Course syllabus for ED225X valid from Spring 2019

Grading scale

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

Education cycle

Second cycle

Main field of study

Electrical Engineering, Engineering Physics

Specific prerequisites

The student should have at least 240 hp from the Master of Science in Engineering program or similar (in the case of a 270 hp exam following earlier regulations, at least 210 hp is required), and should further have knowledge of the main areas within the work in question.

Language of instruction

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

Intended learning outcomes

The aim of the course is to develop the student's ability to independently carry out and report a project work within the area of fusion physics.

After the course, the student is expected to be able to

- apply relevant knowledge and skills on specific problems within electrical engineering,
- within given constraints, also using limited information, independently analyse and discuss complex problems on an advanced level,
- reflect on, evaluate, and critically study personal and other scientific results,
- document and present his/her work for a given target group, satisfying high demands on structure, formality and language,
- identify his/her need for acquiring further knowledge and continually develop his/her competence

Course contents

The thesis work should focus on an interesting problem within the field of fusion physics. Examples of thesis works subjects can be found at the home page of the department. The student can also make her/his own suggestions, which will have to be approved by the tutor. For the thesis work subject to be approved, interesting problems within the research area must be defined. The focus of the work should be on investigation and analysis of the problem. The extent of the work should be such that it is clear that the student has performed at least five months worth of full-time work.

An important part of the thesis work is a careful specification and schedule for the task, as well as a search and study of relevant literature. The thesis work will be presented both in writing and orally.

Course literature

Bestäms individuellt i samråd med handledare.

Kursspråk är svenska eller engelska.

Examination

- XUPP - Examination Question, 30.0 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.

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

Grades: A-F

Students registered at KTH before 1/7-07 have the right to request grades P/F.

Other requirements for final grade

The thesis work can be performed individually or together with another student. In the latter case the examiner should make sure that the work of each student fulfills the requirements for an individual thesis work. The examiner determines the grading together with the tutor. The grade is determined by a weighting of several criteria, of which the student should be informed at the beginning of the course:

1. **Process**, including understanding of the project and its relevance for later professional activity, as well as independency and ability to keep the the schedule that was agreed for the work.
2. **Scientific content**, as well as knowledge of the theoretical background.
3. **Presentation**, both written and oral, inclusive interpretation and analysis of results, as well as possible opposition on fellow student master thesis presentation.

For reaching the pass grade for the course, the student must pass all three criteria given above. A document "Evaluation criteria - ED2225X Degree Project in Fusion Plasma Physics", where the specific grade criteria for the course are made explicit, is handed to the student at course start.

Depending on the student's education program, opposition at the oral presentation may be required; also participation by the student in opposition at another oral degree project presentation may be required.

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.