



FEF3330 Applied Plasma Physics, Advanced Course 5.0 credits

Tillämpad plasmafysik, avancerad kurs

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 FEF3330 valid from Spring 2012

Grading scale

Education cycle

Third cycle

Specific prerequisites

MSc level mathematics and physics, and preferably EF2270 Applied Plasma Physics or equivalent.

Language of instruction

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

Intended learning outcomes

After completed course the students should have knowledge of the research results, particular techniques, and applications both broadly in applied plasma physics, and with focus on the subject area of the thesis.

Course contents

The content is decided on a case by case basis by the PhD advisor in cooperation with the course coordinator.

Disposition

Self study under guidance by the thesis advisor

Course literature

The literature is decided on a case by case basis. If the student is lacking parts (or all of) the prerequisite course EF2270, this can be included in the curriculum. Examples of suitable literature with different orientation within this wide field are.

- Liebermann, M. A., and Lichtenberg A. J., Principles of plasma discharges and materials processing, John Wiley and Sons, New York, 1994. (Materials science)
- Roth, R., Industrial Plasma Engineering, Volume 2, Applications, Institute of Physics Publishing ltd. (A broad overview of industrial plasma sources)
- Fridman, A., 2004, Plasma Physics and Engineering, Taylor and Francis, 2004.
- C. Grabbe (Editor), Plasma Physics Applied, Transworld Research Network, 2006. (Plasma chemistry including combustion)
- Nezlin, M. V., Physics of Intense Beams in Plasmas, IOP Publishing, Bristol, 1993 (Beams and plasma wave particle accelerators).

Examination

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

Seminar(s) given by the student, and one final oral exam.

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.