FED3350 Fusion Plasma Diagnostics, Advanced Course 6.0 credits

Fusionsplasmadiagnostik, avancerad kurs

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

Establishment

Course syllabus for FED3350 valid from Spring 2012

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

PhD students in the fields of electrical engineering, plasma physics, nuclear engineering, or similar.

Language of instruction

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

Intended learning outcomes

When completing the course, the student should be able to

- explain in detail the physics principle for a selected plasma diagnostic,
- perform the setting up of the diagnostic,
- operate the diagnostic and carry out the data acquisition during EXTRAP T2R plasma experiments,

write computer programs for analysis of the acquired data.

Course contents

A diagnostic method for the project is selected among the plasma diagnostics installed at the EXTRAP T2R device, which includes magnetic diagnostics, interferometer, Thomson scattering, spectrometers, bolometers, SXR camera, and electric probes.

Disposition

Individual student projects.

Course literature

Ian. H. Hutchinson,Principles of Plasma Diagnostics, Cambridge University Press, 1987.

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.

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

Examination is based on satisfactory completion of individual projects.

Other requirements for final grade

Handed in project report.

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.