FEI3200 Electromagnetic Theory, PhD Course I 6.0 credits

Elektromagnetisk fältteori, doktorandkurs I

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

Establishment

Course syllabus for FEI3200 valid from Autumn 2011

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

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 shall be able to

- explain Green's theorem; describe Green's functions to Poisson's equation
- expand Green's functions and potentials in discrete or continuous orthogonal bases

- solve electrostatic and magnetostatic boundary value problems
- do multipole expansions of electrostatic and of magnetostatic fields

Course contents

Mathematical methods för electrostatic and magnetostatic source and boundary value problems.

Disposition

Lessons 30 h

Course literature

Jackson, **Classical Electrodynamics** 3:rd ed, chapters 1-5

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.

Other requirements for final grade

Home-assignments, written examination and individually assigned problems.

Oral presentation of one problem.

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.