



Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

4ED094 Aktuella frågeställningar inom vågutbredning, 7,5
högskolepoäng

Topics in wave propagation, 7.5 credits

Main field of study
Electrical Engineering

Subject Group
Electrical Engineering

Level of classification
Second Level

Progression
A1F

Date of Ratification
Approved by Organisational Committee 2009-08-11

The course syllabus is valid from spring semester 2010

Prerequisites
Admission to the course requires a bachelors degree (180 higher education credits) in electrical engineering, or the equivalent, and the courses Antenna theory 7.5 higher education credits (4ED014), Microwave theory 7.5 credits (4ED084) or the equivalent.

Expected learning outcomes

The course covers some central concepts of wave propagation and scattering and is intended as a preparation for the thesis project. Upon completion of the course, the student should:

- be able to combine knowledge of mathematics, physics and radio science in order to obtain a deeper understanding of wave propagation and scattering
- have the ability to solve problems at the advanced level that may also require programming in some form

Content

The course may cover some of the following topics:

- diffraction
- integral equations
- high frequency methods
- asymptotic methods
- wave propagation models

- numerical methods

Type of Instruction

Lectures and assignments.

Examination

The course is assessed with the grades Fail (U) or Pass (G).

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts. Assignments.

Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department.

Required Reading and Additional Study Material

Required reading

Current scientific articles. Pages 25 (25).

MSI, *Distributed material*. Pages 50 (50).