



Course syllabus

Faculty of Technology

Department of Physics and Electrical Engineering

2ED403 Mobil radiokommunikation, 7,5 högskolepoäng

Mobile radio communication, 7.5 credits

Main field of study

Electrical Engineering

Subject Group

Electrical Engineering

Level of classification

First Level

Progression

G2F

Date of Ratification

Approved by Faculty of Technology 2014-10-03

The course syllabus is valid from autumn semester 2015

Prerequisites

Electrical engineering 120 credits incl. 1ED012 Analogue Electronics (7.5 credits), 1ED052 Digital Signals and Systems (7.5 credits), and 1ED062 Analogue Signals and Systems (7.5 credits), or the equivalent.

Objectives

The course introduces the large field of mobile radio communication. The student is expected to combine knowledge of wave propagation and signal processing in order to obtain a basic understanding of mobile radio systems.

Content

The course comprises the following topics

- Antennas, wave propagation, diffraction
- The mobile channel, fading
- Digital modulation and coding
- Diversity

Type of Instruction

Teaching consists of lectures and tutorials.

Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assessment of student performance is made through written test and/or oral examinations and/or presentation of mandatory assignments. The assessment method is decided at the start of the course.

Students who do not pass the regular examination will be offered retrials close to the regular examination.

Course Evaluation

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

Credit Overlap

This course cannot be part of a degree in combination with another course in which the content fully or partly correspond to the content of this course: 2ED103 Mobile radio communication, 7.5 credits

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Required reading

Ahlin L., Frank C. och Zander J., *Mobil radiokommunikation*, 2:a uppl., Studentlitteratur, 2001. Pages 200 (350).