



Course syllabus

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

1DV446 Trådlös kommunikation, 7,5 högskolepoäng
Wireless Communication, 7.5 credits

Main field of study

Computer Science, Electrical Engineering

Subject Group

Informatics/Computer and Systems Sciences

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved by the Board of the School of Computer Science, Physics and Mathematics
2009-11-19

Revised 2011-05-13. Revision made for English translation of the syllabus and course evaluation.

The course syllabus is valid from autumn semester 2011

Prerequisites

1DV414 Network technology I, 7.5 credits, 1DV418 Network technology II, 7.5 credits and 1DV425 Network security, 7.5 credits or equivalent.

Expected learning outcomes

After completing this course the student should be able to:

- describe how the various applications for wireless communication works on logic level
- install and configure a WLAN (wireless local area network)
- analyze and if necessary improve the security of a WLAN
- working in a project
- write a simple project report.

Content

The course consists of the two modules.

Module 1 Theory 2.5 credits

- General communication theory on the logic level.
- Theoretical background for wireless communications.

- Applications such as GSM, 3G, WLAN and Bluetooth.

Module 2 Project 5 credits

- Practical and theoretical work with software and / or hardware for wireless communications.
- Information retrieval in libraries and on the Internet.
- Cooperation with others in a group.
- Report writing and oral presentation of the project.

Type of Instruction

The course consists of lectures and a project. It is mandatory to attend and actively participate in the project component.

Examination

The course is assessed with the grades U,3,4 or 5.
For grade 3, the expected learning outcomes must be achieved.

The types of examination is a written exam on Module 1 as well as an oral presentation and a written report on Module 2. The final grade is given upon completion of the course and based on results from the different types of examination. Receiving a final grade on the course requires at least grade 3 on the exam and the project.

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.

Students not achieving satisfactory results in examination are permitted a second attempt within 6 weeks — during regular semester periods. The number of examinations is limited to five times.

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.

Required Reading and Additional Study Material

Required Reading

Lin, Y-B and Chlamtac, I: *Wireless and Mobile Network Architectures*, Wiley, 2001, ISBN 0-471-39492-0

Manuals used for WLAN (provided by the school)