



# IK2511 Project in Wireless Networks 7.5 credits

## Projekt i trådlösa nät

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

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

## Establishment

Course syllabus for IK2511 valid from Autumn 2010

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

Electrical Engineering

## Specific prerequisites

IK2510 Wireless Networks.

Documented proficiency in English B or equivalent.

## Language of instruction

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

## Intended learning outcomes

The main objective of the course is to deepen and/or broaden the student knowledge and abilities in radio communication systems.

Upon completion of the course, the student should be able to:

- solve a research problem in radio communication and present the obtained results
- write technical reports and make oral presentations
- review other projects in the area and lead a discussion about the results
- work in groups
- identify relevant milestones and write a time plan for a small project
- read through the literature and make a literature study about the research subject
- carry out an M.Sc. thesis project in radio communication
- carry out a project work in industry.

## Course contents

### Disposition

The projects is carried out by groups of 3-4 students. The project group is to write a project report, give an oral presentation and review the work of another group ("opposition"). At the oral presentation all group members should be able to present the work of the group.

An important ingredient in systems design is to grasp the whole width of problems that are involved in designs in the real world and then formulate a sequence of detailed specific problems that can be treated by the tools of engineering science that the student already carries. For this purpose, the project problems are specified from a telecommunication user perspective rather than in mathematical, "technical" terms.

From a strictly technical perspective, the project problems are in most cases quite "loosely" specified. Your first objective will therefore be to make a more detailed formulation of the problem that you will find relevant to solve. You will have to ask yourselves:

- What questions do we need to answer?
- What additional information is required?
- What assumptions need to be made?

Your advisor will discuss these matters with you, direct you to the relevant literature and may also provide you with additional information, wherever this may become necessary. You should, however, note that the problem formulation and finding out what you should do is your job.

## Course literature

- J. Zander and S.-L. Kim, Radio Resource Management for Wireless Networks, Artech House Publishers, 2001.
- Relevanta forskningsartiklar

## Examination

- PRO1 - Project Work, 7.5 credits, grading scale: A, B, C, D, E, FX, F

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.

## Other requirements for final grade

Project 7,5 HEC (A-F).

## 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.