



IT2655 Frontiers of Microelectronics and Information Technology 6.0 credits

Mikroelektronikens och informationsteknikens frontlinjer

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 IT2655 valid from Autumn 2008

Grading scale

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

Education cycle

Second cycle

Main field of study

Electrical Engineering

Specific prerequisites

Language of instruction

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

Intended learning outcomes

The course gives an overview of the frontiers, state of the art, market, visions and developments for some areas of microelectronics and information technology. After the course the participants should have

- **discussed the research frontiers based on the course book and seminars**
- **searched for and read research articles on a topic of choice**
- **written an individual essay in English on this topic**
- **read and commented an essay of another course participant**

Course contents

Active participation is required for at least 10 seminars, but they need not be during the same semester. Reading requirements are set for each seminar. Participants may sign up for either the fall or spring semester, but the course may be finished any semester. Every semester is started with an introductory lecture with an overview of the area and administrative details for the course; this occasion may be counted for the attendance requirement. Voluntary study visits to research labs may be offered during the course. An individual essay on the frontiers of microelectronics and information technology, based on one or more of the seminars, is required. The student may pick the topic, but a literature search must be included. The essay determines the grade.

Course literature

Nanoelectronics and Information Technology: Advanced Electronic Materials and Novel Devices, Rainer Waser
Upplaga: 2 Förlag: Wiley År: 2005 ISBN: 3-527-40542-9

Examination

- ANN1 - Exercise, 1.5 credits, grading scale: P, F
- UPP1 - Essay, 4.5 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

Active participation in at least 10 seminars (ANN1; 1,5hp), written an individual essay in English and read and commented another course participant's essay (UPP1; 4,5hp). The individual essay determines the grade, but all requirements must be fulfilled on time.

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.