



IL2216 Media and Communication Electronics 7.5 credits

Media och kommunikationselektronik

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

Establishment

Course syllabus for IL2216 valid from Autumn 2010

Grading scale

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

Education cycle

Second cycle

Main field of study

Information and Communication Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

After completing the course the students should be able to:

- Identify the advantages and disadvantages in terms of performance, complexity, power consumption etc. for various circuit blocks such as displays, batteries, antennas and memories.
- Explain common problems when manufacturing printed circuit boards.
- Describe the required tasks to qualify a product with respect to interference and electrical security.
- Based on the function of an electronic product, such as a mobile phone, media-player or fire detector, do appropriate trade-offs when selecting components and manufacturing method.

Course contents

Media processing: Overview coding and standards for audio and video processing. Difference in complexity and power consumption between hardware and software implementations.

Mediated interfaces: Display technologies, input devices, sensors

Broadcasting: Antennas, how different modulations impact form-factor, distance and power consumption

Storage media: Memory technologies, limitations

Power supplies: Battery technologies, charging and lifetime

Manufacturing: PCB boards, mounting, printed electronics and sensors

Course literature

Föreläsningsanteckningar och utdelade artiklar.

Examination

- TEN1 - Examination, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, 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.

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

Other requirements for final grade

Laboration (LAB1) and exam (TEN1).

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.