DM1580 Video Technology 6.0 credits

Videoteknik

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

On 2020-10-13, the Head of School of EECS has decided to establish this official course syllabus to apply from the spring semester 2021 (registration number J-2020-1384).

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Language of instruction

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

Intended learning outcomes

After the course the student should be able to:

- choose and motivate different solutions for digital video systems
- seek and value technical information
- estimate required information volumes, bandwidths and transfer time for transmitting video at different quality levels
- understand how to develop equipment and applications in the area of digital TV
- communicate with experts.

Course contents

This course will cover the technical aspects of the process from capturing, coding to distribution. Here are some of the topics:

- video and video signals
- video capturing
- information theory
- sampling and quantization
- video compression
- digital video standards
- display
- storage and distribution.

Specific prerequisites

Completed courses in

- algebra and geometry corresponding to SF1624
- multimedia systems and signals or probability theory and statistics corresponding to at least one of DM1135 and SF1919.

Active participation in a course offering where the final examination is not yet reported in LADOK is considered equivalent to completion of the course.

Registering for a course is counted as active participation.

The term 'final examination' encompasses both the regular examination and the first re-examination.

Examination

- LAB1 - Laboratory Work, 1.5 credits, grading scale: P, F
- PRO1 - Project, 1.5 credits, grading scale: P, F
- TEN1 - Exercise, 3.0 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.

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.