# DM2529 Digital Images for Publication 7.5 credits

## Digital bild för publicering

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

## Establishment

Course syllabus for DM2529 valid from Autumn 2009

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Computer Science and Engineering

## Specific prerequisites

Single course students: 90 university credits including 45 university credits in Mathematics or Information Technology. Swedish B, or equivalent and English A, or equivalent.

## Language of instruction

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

## Intended learning outcomes

After taking the course the students are supposed to be able to:

- valuate and quantify the image quality of photographic systems based on commonly used resolution criteria, and to be familiar with the advantages and disadvantages of the different criteria,
- describe photographic techniques using invisible radiation (ultraviolet, X-rays, infrared) and the properties of images obtained with these techniques,
- explain digital image representation of images in vector or bitmap formatapply suitable compression algorithms to digital images,
- adapt digital images by image processing, image analysis and screening with respect to publication channel,
- use image processing systems for adapting digital images with respect to publication channel,
- explain the principles of colour measurement and colour representation systems,

so that the students

- independently can produce digital originals adapted to publication method by analysis of the production flow and the use of appropriate image and colour management programs,
- will have a clear understanding of the principles for screening methods and how they can be applied,
- will have a clear understanding of colour space transformations in colour management and of the applicability of corresponding rendering.

## Course contents

Lectures and laboratory work within the following areas:

Photographic reproduction technology,

Image scanning, digital image representation of pictures, image compression, image processing, image analysis and screening.

Colour management systems colour measurement and colour spaces.

## Course literature

Meddelas senast 4 veckor före kursstart på kursens hemsida. Föregående läsår användes L. O. Heneberg: Fotografi, teori och tillämpningar. Frazer: Color management.

## 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.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

## Other requirements for final grade

Examination (TEN1; 4,5 university credits)
Laboratory assignments (LAB1; 3 university credits).

## 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.