EN2400 Image Processing 6.0 credits

Bildbehandling

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

Establishment

Course syllabus for EN2400 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

Language of instruction

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

Intended learning outcomes

To provide an understanding of image processing technology.

Course contents

Fundamentals of image processing: vision, physics of light, image acquisition by sensors, image sampling and quantization. Spatial image based enhancement. Frequency-domain based image enhancement. Image restoration: degradation models and noise models, spatial filtering methods, model estimation. Color image processing: color models, color transformations, color enhancement, color segmentation. Image compression fundamentals: lossy and lossless compression, image coding standards.

Course literature

R. C. Gonzales and R.E. Woods. Digital Image processing, (second ed.), Prentice Hall, Upper Saddle River, New Jersey, 2002.

Examination

- ANN1 - Home Work, 1.5 credits, grading scale: P, F
- TEN1 - Examination, 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.

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

Other requirements for final grade

Written examination (75%), home assignments (25%).

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.