



DM1570 Graphic Arts Technology 1 7.0 credits

Grafisk teknik 1

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

Establishment

Course syllabus for DM1570 valid from Autumn 2009

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

For single course students: completed upper secondary education including documented proficiency in Swedish corresponding to Swedish B, English corresponding to English A.

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 are supposed to be able to:

- describe the structure of the graphic arts industry in Sweden
- describe the process steps in the graphic arts production chain
- explain the colour systems; RGB, CMYK and CIELAB
- describe basic image processing methods and apply them in practice
- explain the principle of print preparation and colour management according to ICC and apply them in practice
- explain the process steps of paper production
- select suitable printing method according to product
- select suitable paper grade according to printing method and product
- describe the main printing methods; lithography, flexography, gravure, silk screen and digital printing
- describe the principle for environmental marking of printed products
- explain the principle for measuring print quality in the form of print density, dot gain, optimal ink level, NCI, using a densitometer and perform the measurements
- produce a print ready original
- produce a one-colour print in sheet-fed offset
- work with the main text, image and layout programmes for producing print ready originals
- explain digital image representation of images in vector or bitmap format.
- explain the main file formats
- describe the print start up sequence until approved stockpile
- describe quality control methods in the graphic arts production work flow
- describe the main post production operation steps

so that the students

- can produce technically well structured and typographically appealing documents
- make suitable choices for the production of printed products with respect to the number of copies, print quality and delivery time
- can produce print ready digital original adapted to the printing press
- will be able to follow the subsequent courses in the “Print communication” programme.

Course contents

Lectures on: survey of the graphic arts industry, basic reproduction technology, colour theory, principles for colour printing, page making, printing methods, ink and paper, post press handling and distribution.

Laboratory work: production of a simple printed matter, image processing, colour management systems for print adaptation and measurement of colour strength.

Visits to companies in the industry.

Course literature

To be announced at least 4 weeks before course start. Previous year: K. Johansson: Grafisk kokbok. Guiden till grafisk produktion. Arena.

Examination

- TEN1 - Examination, 4.0 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/heder-skodex/1.17237?l=en_UK.

Other requirements for final grade

Examination (TEN1; 5cr)
Laboratory work (LAB1; 2cr)

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.