



# DD2257 Visualization 7.5 credits

## Visualisering

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

## Establishment

Course syllabus for DD2257 valid from Spring 2019

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Mathematics

## Specific prerequisites

Single course students:

SF1604 Linear algebra, SF1625 Calculus in one variable, SF1626 Calculus in several variables, DD1337 Programming, DD1338 Algorithms and Data Structures, DH2320 Introduction to Visualization and Computer Graphics or corresponding courses.

## Language of instruction

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

## Intended learning outcomes

The students should after the course be able to

- describe basic concepts in visualization
- describe basic methods for visualization of scalar data, vector data and volume data including time dependent data
- use a visualization system such as OpenDX for visualization of scalar data, vector data and volume data including time dependent data
- use a visualization system such as OpenDX for a practical problem.

## Course contents

Perception. Fundamental elements of visualization. Techniques and algorithms for volume visualization. New forms of data presentation. Animation. Software tools. Applications, e.g. fluid visualization.

## Course literature

Meddelas senast 4 veckor före kursstart. The Visualization Toolkit An Object Oriented Approach to 3D Graphics, Will Schoeder, Ken Martin and Bill Lorensen, 4th Edition har använts föregående år.

## Examination

- TEN1 - Examination, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Assignments, 3.5 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](http://www.kth.se/csc/student/heder-skodex/1.17237?l=en_UK).

## 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.