DD2257 Visualization 7.5 credits

Visualisering

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

The official course syllabus is valid from the autumn semester 2024 in accordance with the director of first and second cycle education decision J-2024-1113.Decision date: 2024-04-15

Grading scale

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

Education cycle

Second cycle

Main field of study

Mathematics

Specific prerequisites

- Knowledge in Calculus in One Variable, 7,5 credits, equivalent to completed course SF1625/SF1673.
- Knowledge in linear algebra, 7,5 credits, equivalent to completed course SF1624/SF1672/SF1684.

- Knowledge and skills in programming, 6 credits, equivalent to completed course DD1337/DD1310-DD1319/DD1321/DD1331/ DD100N/ID1018.

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 with a passing grade the student should be able to:
• name concepts and algorithms in visualization and relate them to one another
• describe the basics of visualization algorithms and concepts
• identify and characterise results of selected visualization algorithms
• apply visualization algorithms to small data sets.

Course contents

Data structures and algorithms for visualisation of spatio-temporal data sets. Topological data analysis. Feature based methods. Colour. Perception. Fundamental elements of visualization. Software tools for visualization.

Examination

- LAB1 - Laboratory Assignments, 3.5 credits, grading scale: P, F
- TEN1 - Examination, 4.0 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.

TEN1 is conducted as a written exam.

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.