

Information Visualisation

Programme course

6 credits

Informationsvisualisering

TNM048

Valid from:

Determined by

Board of Studies for Computer Science
and Media Technology

Date determined

2017-01-25

Offered for the last time

Spring semester 2022

Replaced by

TNM111

Main field of study

Computer Science and Engineering, Media Technology and Engineering

Course level

Second cycle

Advancement level

A1X

Course offered for

- Computer Science and Engineering, M Sc in Engineering
- Media Technology and Engineering, M Sc in Engineering
- Applied Physics and Electrical Engineering, M Sc in Engineering
- Information Technology, M Sc in Engineering
- Applied Physics and Electrical Engineering - International, M Sc in Engineering
- Computer Science, Master's programme
- Computer Science and Software Engineering, M Sc in Engineering

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites

Programming. Computer graphics and webprogramming is good but not required.

Intended learning outcomes

After completing the course, the student should be able to:

- assess the use of advanced techniques for analysis of large complex data sets
- reflect on the relevance of perception in the interpretation of interactive representations
- apply standard methods for evaluation of interactive information visualization applications
- implement interactive applications for information visualization

Course content

The lectures provide the theoretical framework necessary to work with information visualization. These cover methods for interactive visualization of large complex data sets, common in areas such as: product development, health-care, process control, bioinformatics, etc. The lectures will also cover perception and methods for evaluation. The labs will focus on the implementation of interactive information visualization and here students work in small groups to make practical use of techniques to analyze abstract datasets. In a final project assignment, the student gets the opportunity to specialize in a specific field of information visualization.

Teaching and working methods

The course is composed of lectures, laboratory assignments and a project assignment

Examination

LAB2	Laboratory work	2 credits	U, G
PRA2	Project assignment	4 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för teknik och naturvetenskap

Director of Studies or equivalent

Camilla Forsell

Examiner

Jimmy Johansson

Course website and other links

<http://webstaff.itn.liu.se/~jimjo/courses/TNMo48/>

Education components

Preliminary scheduled hours: 50 h

Recommended self-study hours: 110 h

Course literature

Information Visualization: Design for Interaction (2nd Edition), Robert Spence.
Prentice Hall, 2007, samt relevanta forskningsartiklar

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.