

COURSE SYLLABUS

Information Visualization, 7.5 credits

Informationsvisualisering, 7.5 högskolepoäng

Course Code:	TIVK14	Education Cycle:	First-cycle level
Confirmed:	Oct 24, 2025	Disciplinary domain:	Technology
Valid From:	Aug 31, 2026	Subject group:	Informatics/Computer and Systems Sciences
		Specialised in:	G1F First cycle, has less than 60 credits in first-cycle course/s as entry requirements
		Main field of study:	Informatics

Intended Learning Outcomes (ILO)

On completion of the course the student shall:

Knowledge and understanding

- display knowledge and understanding of different data types and data attribute types
- display knowledge and understanding of different kinds of information visualizations
- display knowledge and understanding of different kinds of interactions for information visualizations

Skills and abilities

- demonstrate the ability to reason why different visualization and interactions are suitable for different types of data and data attributes and why not
- demonstrate the ability to build a visualization for a given data set
- demonstrate the ability to augment an information visualization with interactions
- demonstrate the ability to identify and analyze existing interactive information visualizations

Judgement and approach

- demonstrate the ability to conceptualize domain-specific requirements in terms of visualization and interaction techniques.

Content

Based on theoretical foundations of visual perception and visual channels, this course teaches how to approach a domain-specific data problem and how to create an appropriate visualization and interactions for it. Vice-versa it also teaches how to analyze and assess existing visualizations and interactions.

In the above context, the course starts with foundations of visual perception and visual channels interwoven into a theoretical visualization model. This model guides in translating an information need that concerns a specific set of domain data into matching data types, suitable visualizations, and appropriate interactions. The course will present and discuss in detail fundamental and advanced information visualizations as well as suiting interactions for different kinds of data such as:

- Multidimensional/multivariate data
- Trees and hierarchical data
- Graphs and networks
- Time-series data
- Set-based or categorical data.

Type of instruction

Lectures and laboratory assignments.

Language of instruction is in English.

Entry requirements

General entry requirements and taken course Web Design Projekt 7,5 credits (or the equivalent).

Examination and grades

The course is graded 5, 4, 3 or U.

The final grade for the course is based upon a balanced set of assessment. The final grade will only be issued after satisfactory completion of all assessments.

Registration of examination:

Name of the Test	Value	Grading
Examination	3.5 credits	5/4/3/U
Assignment	4 credits	5/4/3/U

Course literature

Please note that changes may be made to the reading list up until eight weeks before the start of the course.

The course is based on Tamara Munzner's book "Visualization Analysis and Design", but it is not mandatory to buy it. All exam-related contents will be presented in the lecture.

Title: Visualization Analysis and Design

Author: Tamara Munzner

Publisher: A K Peters (1. Dezember 2014)

ISBN: 9781466508910