COURSE SYLLABUS
Information Visualization, 7.5 credits

Informationsvisualisering, 7,5 högskolepoäng

Course Code:	TIVK14		**Education Cycle:**	First-cycle level
Confirmed by:	Dean Jun 1, 2024		**Disciplinary domain:**	Technology
Valid From:	Aug 1, 2024		**Subject group:**	IF1
Version:	1		**Specialised in:**	G1F
			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.

Contents

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.

The teaching is conducted in English.

Prerequisites

General entry requirements and passed courses Web and User Interface Design, 15 credits and Foundations of Programming, 7,5 credits (or the equivalent).

Examination and grades

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

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

The literature list for the course will be provided 8 weeks before the course starts.

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