Linnæus University

# Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

## 4DV301 Tillämpad Informationsvisualisering, 7,5 högskolepoäng
## Applied Information Visualization, 7.5 credits

**Main field of study**
Computer Science

**Subject Group**
Informatics/Computer and Systems Sciences

**Level of classification**
Second Level

**Progression**
A1F

**Date of Ratification**
Approved by the Board of the School of Computer Science, Physics and Mathematics 2009-09-08

Revised 2010-08-05. Revision of prerequisites and course evaluation.

The course syllabus is valid from spring semester 2011

**Prerequisites**
A course in Information Visualization (4DV300), 7.5 credits or the equivalent.

## Expected learning outcomes
Upon completion of the course the student should:

- be acquainted with the most important visualization techniques and systems for special data sets and applications domains
- have the capability to choose suitable visualization techniques for various data types
- be able to critically reflect upon standard approaches
- have a good background for the development of new innovative visualizations
- have a good understanding of evaluation methods for InfoVis tools and approaches
- have a good overview of the most important challenges in the field.

## Content
Information visualization (InfoVis) is a research area that focuses on the use of visualization techniques to help people understand and analyze abstract data without geometric correspondences, such as tabular or hierarchical information sources.
The course covers visual representations, interaction techniques as well as visualization tools for:

- text and documents
- network data (graphs)
- time series
- information visualization for the masses
- WebVis, BioVis, MedVis, GeoVis.

Furthermore, this course discusses issues that are important for information visualization, such as evaluation of techniques and tools and InfoVis challenges.

## Type of Instruction

Lectures, seminars, self-studies, exercises and/or practical work.

## Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
Assessment of the student's performance is made through written or oral tests and presentation of compulsory practical assignments. The type of assessment used in the course will be decided upon at the beginning of the course.
Students who do not pass the regular examination are given the opportunity to do a resit examination shortly after the regular examination.

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

## Course Evaluation

A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

## Required Reading and Additional Study Material

**Required reading**

Spence, R. *Information Visualization – Design for Interaction.* 2nd Ed., Prentice-Hall, 2007. Pages 250 (304).
Kerren, A., Ebert, A., and Meyer, J. *Human-Centered Visualization Environments*. LNCS Tutorial 4417, Springer, 2007. Pages 220 (403).
DFM. *Distributed material and research papers*. Pages 300 (300).