Linnæus University

Jnr: 2014/3174-3.1.2

Course syllabus

Faculty of Technology
Department of Computer Science

4DV800 Informationsvisualisering, 7,5 högskolepoäng
Information Visualization, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved by Faculty of Technology 2014-10-03
The course syllabus is valid from autumn semester 2015

Prerequisites
90 credits in Computer Science including a course in Programming and Data Structures 7.5 credits (1DV507)or equivalent.

Objectives
After the course the student should:

- know the most important techniques (regarding interaction and visual representation) and systems in Information Visualization (InfoVis)
- have the capability to choose suitable visualization techniques for various data types
- be able to critically reflect upon standard approaches
- have a good understanding of basic perceptual principles that have influence to InfoVis
- have a good background for the development of new innovative visualizations

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:

- basics in perception (preattentive processing, Gestalt laws)
- interaction (dynamic queries, zoom and pan, or focus and context)
- visual representations for 1D, 2D, 3D and multidimensional data, hierarchies, and graphs

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

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assessment of the student's performance is made through written or oral exams as well as presentation of compulsory practical/theoretical assignments. To be allowed to attend the exam requires passed assignments. This means that successfully finished assignments are a prerequisite for doing the exam. If a student does not pass an individual assignment, then he/she will get a chance for an improvement that has to be submitted within an appropriate deadline.

The type of assessment used in the course (written/oral) and deadlines will be decided 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.

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.

Credit Overlap
4DV300 Information Visualization, 7.5 credits

Other
Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material
Required reading
Spence, R. Information Visualization – Design for Interaction. 2nd Ed., Prentice-Hall, 2007. Pages 250 (304).
Ware, C. Information Visualization: Perception for Design. 2nd Ed., Morgan Kaufman, 2004. Pages 200 (486).
DFM. Distributed material and research papers. Pages 380 (380).