Linnæus University

Course syllabus

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

2DV303 3D-grafik, 7,5 högskolepoäng
3D-graphics, 7.5 credits

Main field of study
Computer Science

Subject Group
Informatics/Computer and Systems Sciences

Level of classification
First Level

Progression
G2F

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

Revised 2010-04-23

The course syllabus is valid from spring semester 2011

Prerequisites
90 credits in Computer Science, including a basic course in computer graphics 7.5 credits.

Expected learning outcomes
Upon completion of the course, students should:

- have acquired a deeper knowledge about important theories in 3D graphics
- be well acquainted with and be able to efficiently use various representations within 3D graphics
- be well experienced in 3D programming in OpenGL
- with a good ability be able to model in 3D
- understand and suggest solutions on general 3D problems

Content
The course addresses basic 3D representations, 3D programming in OpenGL, and advanced rendering techniques such as ray-tracing, radiosity and texture mappings. Further contents are graphics file formats, animation and special representations such as fractal surfaces, particle systems and various physical models.

Type of Instruction
Teaching consists of lectures, seminars and practical work. Practical work is carried out

individually or in groups.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
Assessment of the students performance is made through written examination and/or assignments which are presented orally and/or in written form. The assessment method is decided at the start 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 written 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
Hearn, D & Baker, P,*Computer Graphics with OpenGL*, 3rd Ed., Prentice Hall, 2004. Pages 350 (850).
DFM,*Distributed material*.Pages 50 (50).