

# 3D Graphics

Programme course

8 credits

3D Grafik

TNGD25

Valid from: 2017 Spring semester

**Determined by**

Board of Studies for Computer Science  
and Media Technology

**Date determined**

2017-01-25

## Main field of study

Graphic Design and Communication

## Course level

First cycle

## Advancement level

G2X

## Course offered for

- Graphic Design and Communication

## Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

## Prerequisites

Digital image processing

## Intended learning outcomes

The aim of the course is to provide insight into and experience with fundamental methods, tools, and applications for 3-D graphics, specifically in modeling, animation and rendering. Interactive applications are not covered. The course is an introduction to a broad and complex subject, but should provide a general foundation for the students to undertake further studies and develop further skills on their own. After the course, students should:

- have fundamental skills in using at least one commonly used tool for 3-D graphics production
- discuss and use common methods for modeling, animation and rendering
- choose and use tools and methods for 3-D graphics production with proper consideration of intent
- analyze and evaluate 3-D graphics in relation to other media
- analyze and evaluate possibilities and limitations in 3-D graphics production
- evaluate and criticize their own and others' choice of solutions, both in terms of the use of technology and in terms of form and content.

## Course content

Overview of theory and practice in modeling, materials, lighting, animation and rendering.

## Teaching and working methods

The first part of the course present general methods and concepts through a lab series with supporting lectures, where theory is illustrated by focused practical assignments.

The conclusion of the course is a somewhat larger project assignment with considerable student choice in what task to take on. The task should be a concrete concept study relevant to a real world problem, decided in collaboration with the tutor. The assignment should pertain to the general area of design and communication, and reflect back on previous courses in design, visualisation and storytelling.

Assessment is done by written and oral presentations.

The course spans the entire fall semester, with the lab sessions and the project assignment concentrated to one half-semester each.

## Examination

UPG1	Project Work	4 credits	U, 3, 4, 5
LAB1	Laboratory Work	4 credits	U, G

## Grades

Four-grade scale, LiU, U, 3, 4, 5

## Department

Institutionen för teknik och naturvetenskap

## Director of Studies or equivalent

Camilla Forsell

## Examiner

Stefan Gustavson

## Course website and other links

<http://www.itn.liu.se/~stegu>

## Education components

Preliminary scheduled hours: 58 h

Recommended self-study hours: 155 h

## Course literature

### **Additional literature**

### **Other**

## Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at [http://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).