Course syllabus

3D-modellering och rendering, del 2
3D Modelling and Rendering, Part 2

IDEA90, 3 credits, G1 (First Cycle)

Valid for: 2023/24
Faculty: Faculty of Engineering, LTH
Decided by: PLED ID
Date of Decision: 2023-03-16

General Information

Main field: Industrial Design.
Compulsory for: KID2
Language of instruction: The course will be given in English

Aim

After completion of the the course, students should have acquired basic 3D modelling and 3D rendering skills in order to realise and present designs of basic complexity, and output 3D data for rapid prototyping (3D printing).

Learning outcomes

Knowledge and understanding
For a passing grade the student must

demonstrate to:

- Understand that a thorough comprehension of a design's core aesthetics and dimensions is the prerequisite for creating 3D models and 3D renderings with software
- Understand the 3D modelling and 3D rendering software user interfaces
- Understand the basic workflows and sequences of actions in order to translate designs of basic complexity into 3D models and 3D renderings, and to make changes as a design evolves towards its final state.

Competences and skills
For a passing grade the student must

- With guidance create rapid prototyping/rendering ready 3D models of rising complexity from 2D sections and transitions between 3D forms
- With guidance create photorealistic 3D renderings using real-world cameras, lighting, materials and textures
- With guidance create a rapid prototype (3D print) of a basic design, including draft angles.

Judgement and approach
For a passing grade the student must

- be able to reflect upon the tools used and sequences of actions to understand that there are often alternatives to achieve the desired result
- be able to adjust their workflow, depending on each new design that may require a different approach
- be able to comprehend that for certain designs, other software alternatives may be more suitable than the one used.

Contents

The course consists of lectures, individual supervision and self-study/homework.

Examination details

Grading scale: UG - (U,G) - (Fail, Pass)
Assessment: A passing grade will be awarded based on 80% attendance, completion of basic 3D modelling and 3D rendering exercises.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Admission

Assumed prior knowledge: IDEA85 or equivalent.
The number of participants is limited to: No
The course overlaps following course/s: IDEA10

Reading list

- Software manual and help files; online videos, forums and discussion groups.

Contact and other information

Course coordinator: Andreas Hopf, Andreas.Hopf@design.lth.se
Course homepage: http://www.ide.lth.se