

COURSE DETAIL

SURFACE MODELLING, RENDERING, AND 3D

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering

UCEAP Course Number

106

UCEAP Course Suffix**UCEAP Official Title**

SURFACE MODELLING, RENDERING, AND 3D

UCEAP Transcript Title

SURFACE MODELLING

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

The course includes parts of 3D product modelling by surface modelling, scanning, product simulation, modelling and Rapid Prototyping in 3D. The computerized surface modelling (Rhino och Maxwell studio) deals with the following areas: introduction to 3D modelling; interface basics, primitive objects (spheres, cubes, cylinders); transformation, mirror, and duplicate objects; NURBS-curves (CVs, Edit points and Key-points curves); turn curves into different types of NURBS surfaces (skinned, revolved, planar, extruded and swept); edit CV-curves; working with layers and use layer symmetry; trim excess of surfaces; create advanced double bent surfaces. Other areas covered in the course are: create STL (Sterio Lithography) file; export model to CAD-program; rendering basics using different types of renders including light setup, shaders and textures; animation basics. The computerized product simulation deals with the following areas: introduction to Virtual Reality; interface basics; importing 3D objects; associate behaviors with the objects; create interactivity; the 3D scanning part includes some basic 3D scanning methods; scanning objects and exporting the data to a computer program. The rapid prototyping part of the course includes creating a 3D print from a computerized product model to a physical object.

Language(s) of Instruction

English

Host Institution Course Number

MMKF25

Host Institution Course Title

SURFACE MODELLING, RENDERING AND 3D

Host Institution Course Details

https://kurser.lth.se/kursplaner/19_20%20eng/MMKF25.html

Host Institution Campus

Engineering

Host Institution Faculty

Host Institution Degree

Host Institution Department

Engineering- Product Development

Course Last Reviewed

2020-2021

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