

SYLLABUS

Advanced Modelling 7.5 credits D7010A

Avancerad modellering

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2022-02-11**

Advanced Modelling 7.5 credits D7010A

Avancerad modellering

Second cycle, D7010A

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Industriell design	Other Subjects within Technology

Entry requirements

Completed courses of at least 120 credits, of which at least 30 credits in the subject area Industrial design, with at least the grade Pass.

Selection

The selection is based on 30-285 credits

Course Aim

After the course the student will:

Knowledge

- Know how to create models fitted to external requirements regarding geometry, tolerances and finish
- Know what parameters that are important to ensure quality in a model.

Skills

- Have the ability to evaluate quality in surface models.
- Have the ability to optimize models according to in- and target-data.
- Have the ability to work out strategies for construction of models regarding application.
- Have the ability to analyze a shape and find the best modeling strategy.

Approach

- Show ability for progression in learning and ability to independently develop ones competencies.

Contents

The topics that the course addresses are:

- Surface- and curve theory
- Modelling strategies
- Tools for surface generation
- Tools and methods for curvature control
- Problem solving
- Symmetric modelling
- In-data management
- Physical input
- Deviation control
- Surface generation from point data
- Surface/Solid modeling
- Out-data and export to other systems

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

The course consist of theory lectures and walk troughs of techniques and tools. A number of hand-in assignments shall be performed along with a project assignment that is the final assignment together with a written reflection.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. The course is given with differentiated grades. Knowledge and skills are examined in hand-in assignments and project assignment, approach is examined in written reflection.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Remarks

Students must register for the courses themselves, or contact ETKS educational administration eduetks@ltu.se, not later than two days after the quarter commences. Failure to do so can result in the place being lost. This rule also applies to students with a guaranteed place.

Course offered by

Department of Social Sciences, Technology and Arts

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0002	Assignment report	G U 3 4 5	3	Mandatory	A15	
0003	Project work	G U 3 4 5	3	Mandatory	A15	
0004	Reflection	U G#	1.5	Mandatory	A15	

Last revised

by Director of Undergraduate Studies Daniel Örtqvist, Department of Social Sciences, Technology and Arts 2022-02-11

Syllabus established

by Institutionen för arbetsvetenskap 2010-02-22