

SYLLABUS

Computer-aided Design 7.5 credits M0010T

Datorstödd konstruktion

Course syllabus admitted: Autumn 2023 Sp 1 - Present

DECISION DATE
2022-02-14

Computer-aided Design 7.5 credits M0010T

Datorstödd konstruktion

First cycle, M0010T

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Maskinkonstruktion	Mechanical Engineering

Main field of study

Industrial Design Engineering

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and Calculus M0047M/M0050M,, Linear Algebra and Calculus M0048M/M0051M and Physics 1 F0004T or equivalent.

Selection

The selection is based on 1-165 credits.

Course Aim

After the course the student will be able to:

- model simple to moderately complex mechanical designs in a solid modelling system
- perform engineering analyses (finite element method and rigid body dynamics)
- have applied the skills in a project

Contents

Introduction to solid modeling
Assembly modeling
CAM Solid model-based drawings
Computer aided analysis: finite element method, rigid body dynamics
Visualization
Design exercise

Oral presentation of the design exercise.

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 is presented in the form of compulsory lectures, computer exercises and assignments.

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. For grade 3: Approved assignments, quizzes and approved design exercise. For grade 4 and 5: Grades are based on the presentation of the design exercise, a applied modeling test.

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

The course may not be combined with MTM061.

Overlap

The course M0010T is equal to MTM116

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0002	Project work	U G#	3	Mandatory	A07	
0007	Quiz	U G#	0.5	Mandatory	A10	
0009	Assignment report	U G#	1	Mandatory	A21	
0010	Design Exercise	G U 3 4 5	3	Mandatory	A21	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Niklas Lehto, Programme Director 2022-02-14

Syllabus established

by Department of Applied Physics and Mechanical Engineering 2005-01-05