

**SYLLABUS**

# **Mechanical Engineering, Introduction Course 7.5 credits W0025T**

**Maskinteknik, introduktionskurs**

**Course syllabus admitted: Autumn 2023 Sp 1 - Present**

**DECISION DATE  
2020-02-14**

# Mechanical Engineering, Introduction Course 7.5 credits W0025T

## Maskinteknik, introduktionskurs

### First cycle, W0025T

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G#	Maskinteknik	Mechanical 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

## Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

## Course Aim

### 1. Knowledge and understanding

The student should:

- Exercises in working and thinking about an engineering approach
- Understand the basics of using solid-based 3D CAD for design.

### 2. Skills and abilities

After completion of the course, the student will pass the course with an approved result:

- be able to write technical reports according to given instructions
- know the basics of 3d sketching and formal rules of practice
- understand the basics of mechanical detail constructions and link mechanisms
- design simple mechanical constructions
- design easier four-bar mechanisms
- be able, in groups, to plan, implement and present final results in simpler engineering projects
- be able to model simple mechanical constructions in 3D CAD

### 3. Valuation and approach

- gain experience in cooperation in smaller groups
- gain insight into the role of the engineer in society as well as ethical aspects of engineering work
- have exercised their ability in engineering thinking

## Contents

The fundamentals of mechanical constructions and four-bar mechanisms. Project work in projects related to mechanical problems. Basic drawing technique, drawing rules and drawing production. Project assignment and written and oral presentation.

- basic solid modeling for components and assemblies
- construction task.

## Realization

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

Lectures, lessons and exercises, project work. Lectures / lessons include reviews of important theoretical sections. The project will give the opportunity to work with problem solving. The teaching consists of lectures, computer exercises, and a design assignment. The course includes information search.

## 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.

Written presentation of assignments and project work. Oral presentation of project work.

## 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.

## Course offered by

Department of Engineering Sciences and Mathematics

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Project work	U G#	4.5	Mandatory	A20	
0002	Assignment report	U G#	3	Mandatory	A20	

## 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.

## **Syllabus established**

by Niklas Lehto 2020-02-14