

**SYLLABUS**

# **Introduction to technology**

## **7.5 credits M0009T**

**Ingenjörskonst**

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

**DECISION DATE**  
**2021-02-17**

# Introduction to technology 7.5 credits M0009T

## Ingenjörskonst

### First cycle, M0009T

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 + Swedish upper secondary school courses Physics 2, Chemistry 1, Mathematics 3c or Mathematics D.

## Selection

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

## Course Aim

The student shall after passing the course be able to:

### 1. Knowledge and understanding

- select methods for 3D drawing
- state basic rules for machine drawings
- describe the basic principles for mechanical design of link mechanisms

### 2. Skills and abilities

- write a technical report
- create 3D drawings and machine drawings
- design basic mechanical systems
- design basic link mechanisms
- in a team, plan, carry out and present the results from a technical development project

### 3. Ability of assessment and attitude

- show the ability to work in a smaller team
- reflect about the societal and ethical aspects of engineering

## Contents

The course includes analysis and design of four-bar mechanisms. The project assignment is focussed on mechanical engineering problems. Written and oral presentations are included in the course.

## Realization

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

The teaching is done through lectures, laboratory work, home assignments, and project work. The lectures includes the theoretical framework and information about research activities at the Department is given as guest lectures. The laboratory exercise is performed in groups. Home assignment are performed individually and in groups. The project work is performed in groups and provides the opportunity to work with problem solving, product development and/or prototype testing.

## 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. Compulsory participation in lectures (> 80%). Written reports for home assignments. Oral presentation of laboratory work and 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.

## Overlap

The course M0009T is equal to R0007R, MTM455, MTM108, F0051T

## Course offered by

Department of Engineering Sciences and Mathematics

## Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0002	Lectures	U G#	2.5	Mandatory	A12	
0003	Assignment Report	U G#	5	Mandatory	A12	

## 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 Head Faculty Programme Director Niklas Lehto 2021-02-17

## Syllabus established

The syllabus was established by the Department of Applied Physics and Mechanical Engineering 2007-02-28, and remains valid from autumn 2007.