

# CAD and Machine Elements

Programme course

6 credits

CAD och maskinelement

TMKT14

Valid from: 2017 Spring semester

**Determined by**

Board of Studies for Industrial  
Engineering and Logistics

**Date determined**

2017-01-25

**Offered for the last time**

Spring semester 2019

**Replaced by**

TMKT94

## Main field of study

Mechanical Engineering

## Course level

First cycle

## Advancement level

G2X

## Course offered for

- Industrial Engineering and Management - International, M Sc in Engineering
- Industrial Engineering and Management, M Sc in Engineering

## Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

## Prerequisites

Engineering mechanics and Strength of materials.

## Intended learning outcomes

The course introduces the student to the field of machine design, where drawing technique, CAD and machine elements are core disciplines. After the course, the students are expected to be able to:

- perform basic technical drawings.
- perform basic modelling tasks using an advanced CAD system.
- show basic knowledge about, and ability to perform basic analyse of common machine elements.

## Course content

The foundations of engineering drawing. Introduction to computer-based drawing- and design-tools. Introduction to Machine elements, bolted joints, springs, fluid-film bearings, rolling element bearings and spur gear transmissions, etc.

## Teaching and working methods

The course is taught in lectures, lessons and laboratory exercises

## Examination

LAB3	Laboratory work	0.5 credits	U, G
TEN1	Written Examination	3 credits	U, 3, 4, 5
LAB2	Exercise	1.5 credits	U, G
UPG3	Drawing exercises	1 credits	U, G

## Grades

Four-grade scale, LiU, U, 3, 4, 5

## Department

Institutionen för ekonomisk och industriell utveckling

## Director of Studies or equivalent

Peter Hallberg

## Examiner

Peter Hallberg

## Course website and other links

<http://www.iei.liu.se/machine/courses/tmkt14>

## Education components

Preliminary scheduled hours: 68 h

Recommended self-study hours: 92 h

## Course literature

Se kurshemsida.

## Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at [http://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).