



# ML1204 Machine Components

## 6.0 credits

Maskinkomponenter

This is a translation of the Swedish, legally binding, course syllabus.

### Establishment

On 29/03/2022, the Dean of the ITM School has decided to establish this official course syllabus to apply from autumn term 2022 (registration number M-2022-0460)

### Grading scale

A, B, C, D, E, FX, F

### Education cycle

First cycle

### Main field of study

Technology

### Specific prerequisites

Completed courses ML1101

### Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

# Intended learning outcomes

On completion of the course, the students should be able to:

1. identify and describe the purpose and function of commonly used machine components
2. analyze and simulate selected machine components from a system perspective
3. systematically structure, solve, report and discuss technical issues
4. systematic problem solving and solution reporting

# Course contents

- common machine components: Springs, fasteners, brakes, bearings, couplings, gears, shafts and rotors
- select suitable machine components based on their functional properties
- use catalogs of materials and standards to dimension machine components in terms of strength and service life
- make assumptions and approximations in the dimensioning of machine components
- function decomposition and function modeling
- structure problems that lack a clear and concise description

# Examination

- TEN2 - Written Examination, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- INLA - Assignments, 2.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

# Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.