



*Course syllabus*

# Introduktion till maskinteknik Introduction to Mechanical Engineering

**MMTA02, 6 credits, G1 (First Cycle)**

**Valid for:** 2023/24

**Faculty:** Faculty of Engineering, LTH

**Decided by:** PLED M

**Date of Decision:** 2023-04-11

## General Information

**Main field:** Technology.

**Compulsory for:** M1

**Language of instruction:** The course will be given in Swedish

## Aim

- To provide the student with fundamental technical frames and an understanding of the technology platform of mechanical engineering.
- To arouse the student's curiosity for the different fields of subjects within mechanical engineering by combining experimental studies with theoretical questions connected to an existing product.

## Learning outcomes

### *Knowledge and understanding*

For a passing grade the student must

- be able to show knowledge of the technology platform of mechanical engineering.
- be able to show an understanding of the connection between a practical working system/product and the theoretical knowledge, necessary to develop the system/product.
- in group, be able to describe the function of components in an assembled product within given limits.

- in group, be able to describe the interaction between components in an assembled product within given limits.
- in group, be able to carry out a project consisting of design/product development and manufacturing.
- in group, be able to document and describe a project in a technical report.
- in group, be able to give an oral presentation in order to describe a project.

#### *Competences and skills*

For a passing grade the student must

- in group, be able to carry out simple experiments on a product related to mechanical engineering, according to given instruction.
- be able to interpret and understand technical instructions.
- in group, be able to create basic technical drawings with CAD.
- in group, be able to carry out basic manufacturing and assembly.

## Contents

During the first half of the course the students are working during experimental exercises with tasks connected to a commercial product. The experimental exercises are based on the technology platform of mechanical engineering e.g. product design, production technology, material science and machine element. Each experimental exercise is preceded by lectures given by experts from the current field of subject. The basis of the course is that the practical applied function/process should be put in focus of the activities.

During the second half of the course the students are working with a design/product development project. Some basic manufacturing and assembly work is also included in the project. The project should in addition to a manufactured product also result in both a written report and an oral presentation why lectures regarding written and oral presentation are given during the project.

## Examination details

**Grading scale:** UG - (U,G) - (Fail, Pass)

**Assessment:** Compulsory laboratory sessions and a compulsory project with both written and oral presentation.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

## Admission

**The number of participants is limited to:** No

**The course overlaps following course/s:** MMTA01

## Reading list

- Course material compiled by the department.

## Contact and other information

**Course coordinator:** Hans Walter, [hans.walter@iprod.lth.se](mailto:hans.walter@iprod.lth.se)

**Course homepage:** <http://www.iprod.lth.se>