



# MG1206 Applied Engineering

## 12.0 credits

Tillämpat ingenjörarbete

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

### Establishment

The official course syllabus is valid from the spring semester 2025 in accordance with the decision by the Head of the ITM School: M-2023-2484. Date of decision: 2023-11-30

### Grading scale

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

### Education cycle

First cycle

### Main field of study

Technology

### Specific prerequisites

- Passed SEM1 in MG1201
- Active participation in PRO in MG1205

### Language of instruction

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

## Intended learning outcomes

After passing the course, the student should be able to:

1. Plan, cooperate and carry out assignments like an engineer
2. Use tools and methods to formulate and handle industrial challenges.
3. Analyse and evaluate different technical solutions related to given challenges
4. Model and evaluate alternative solutions
5. Apply engineering skills to design a sustainable solution to a defined problem
6. Orally and in writing give an account of problems and solutions, for a problem owner

## Course contents

The aim of the module is that the students should develop their ability to use all knowledge and skills that have been trained throughout their first year of studies.

In small groups, the students work systematically to handle a problem that is developed in collaboration with the industry. The work includes problem formulation, root cause analysis, application of basic decision models to prioritise needs, in order to develop alternative solutions and choose the most advantageous. This then should be further developed and presented,

The solution is presented to industry representatives at a final exhibition, where all groups show their solution proposals.

## Examination

- INL1 - Hand-in tasks, 1.0 credits, grading scale: P, F
- INL2 - Hand-in tasks, 1.0 credits, grading scale: P, F
- INL3 - Hand-in tasks, 1.0 credits, grading scale: P, F
- INL4 - Hand-in tasks, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory work, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- SEM1 - Seminar, 0.5 credits, grading scale: P, F
- PRO1 - Project, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- INL5 - Hand-in tasks, 1.5 credits, grading scale: A, B, C, D, E, FX, 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.