



# MG212X Degree Project in Production Engineering, Second Cycle 30.0 credits

Examensarbete inom industriell produktion, avancerad nivå

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

## Establishment

Course syllabus for MG212X valid from Spring 2022

## Grading scale

P, F

## Education cycle

Second cycle

## Main field of study

Mechanical Engineering

## Specific prerequisites

The specific prerequisites for a degree project of 30 credits at advanced level are: all courses from the syllabus years 1-3, or courses required for issuing a Bachelor's degree, and at least 60 credits of courses at the advanced level must be completed. The courses at the advanced level must include courses in the MSc in engineering programme that are relevant to the degree project as well as a course in scientific theory and research methodology.

# Language of instruction

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

# Intended learning outcomes

After passing the degree project course, the student should be able to (based on the KTH approved ILOs for degree projects for the Degree of Master of Science in Engineering):

- account for the disciplinary foundation and applicable methods within the subject area "Production engineering", and demonstrate advanced knowledge in its current research and development
- with overall view, critically and systematically search, collect and integrate knowledge, and identify the need for additional knowledge
- identify, analyse, assess and handle complex phenomena, issues and situations, even with limited information
- plan and with adequate methods carry out qualified assignments within given time frames, and evaluate this work
- develop and evaluate products, processes, systems, methods or technical solutions, considering the preconditions and needs of people, and the aim of the society for economically, socially and environmentally sustainable development
- orally and in writing, in dialogue with different groups, clearly account for and discuss one's own conclusions, and the knowledge and the arguments that these are based on
- make assessments considering relevant scientific, social and ethical aspects
- participate in research and development, or independently work in other qualified activities

# Course contents

The degree project is an individual engineering work, including theoretical and/or experimental activities, and report writing.

It should include both application and refinement of knowledge and skills acquired during previous engineering education, with a focus on production engineering.

The project task should require professional engineering or equivalent skills. The work should have a certain degree of novelty, and include elements of assessment, analysis and synthesis. A literature and/or state-of-the-art study should always be carried out. Depending on the character of the work, the literature study could be more or less extensive.

# Examination

- XUPP - Examination Question, 30.0 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.

## **Other requirements for final grade**

Documented attendance at at least two final presentations of other degree projects, and being the reviewer of and opponent at one further final presentation.

Approved examination question (XUPP; 30 cr)

## **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.