



# MF204X Degree Project in Mechatronics, Second Cycle 30.0 credits

Examensarbete inom mekatronik, avancerad nivå

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

## Establishment

Course syllabus for MF204X valid from Autumn 2011

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Mechanical Engineering

## Specific prerequisites

The thesis should be part of a deepening in the chosen main subject (Mechanical Engineering) and / or technical field and at the advanced level to meet the requirements for a degree. In the normal case required the compulsory courses in the master program Engineering Design / Mechatronics, as entry requirements. Depending on the focus and depth of the degree work exemptions can be made if the current knowledge base, is still in the main field. If the student wants their final thesis in an area outside the field of technology / training program this must be approved by the director of undergraduate studies (GA).

# Language of instruction

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

## Intended learning outcomes

General learning outcomes:

After the course the student will be able to:

- apply relevant knowledge and skills acquired in the technology to a given problem
- within a given framework, even with limited information, independently analyze and discuss complex issues, and dealing with major problems at the advanced level in the technology
- reflect on and critically review their own and others' scientific achievements
- be able to document and present their work, for a given target, with the highest standards of structural, formal and language processing
- be able to identify the need for further knowledge and continuously upgrade their skills

These KTH common goals should be the basis of course objectives for all theses. Additional or specific price target for the thesis may be developed by schools, for training or for individual graduate work topics

Specific learning outcomes:

The students

- show deep knowledge about the principles of Mechatronics systems architecture and functions.
- be able to compare and critically assess aspects on an engineering problem the needs a complex physical product as part of the solution.
- demonstrate an ability to orally and in writing present and discuss conclusions for mechatronic problems and solutions..

## Course contents

The main content will be adapted to the situation that the thesis is expected to be performed, subject specialization, application area, academic or industrial environment, national or international etcetra.

Students are expected to demonstrate their ability to, with a high degree of initiative and independence formulate and solve an engineering problem using a wide range of knowledge

and skills. The topic of the thesis may vary but it must contain a significant technical content and have a clear orientation to mechatronics

## Course literature

It is expected that students will use modern webtools and databases to find relevant scientific literature and to find additional ways to other information sources that improve learning and problem solving

## Examination

- XUPP - Examination Question, 30.0 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.

KTH-regulations

## Other requirements for final grade

KTH-regulations

## 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.