



# MF2071 Research Methodology in Mechatronics 4.5 credits

Forskningsmetodik i mekatronik

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

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

## Establishment

Course syllabus for MF2071 valid from Autumn 2014

## Grading scale

P, F

## Education cycle

Second cycle

## Main field of study

Mechanical Engineering

## Specific prerequisites

The course MF2070 should be passed. Completed Bachelor's degree in mechanical engineering.

## 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 student should be able to:

- Summarise and at a general level discuss important challenges and trends in the area of mechatronics and embedded control systems.
- Discuss and evaluate different scientific research methods.
- Evaluate, discuss and argue around research ethics.
- Carry out a scientific study.
- Write a scientific article in within a specific field, related to the mechatronics and embedded control systems.
- Review and give constructive criticism on another student's scientific article.

## Course contents

The course gives an increased and deepened knowledge in contemporary scientific and industrial development trends within the fields mechatronics and embedded control systems. Scientific methods are studied and to be able to work with both research ethics and research methodology, the fields are treated both at a general level and for the specific research specialisation of mechatronics and embedded control systems. Scientific writing, review and presentation are included.

Furthermore, the course includes preparations for the second-cycle Degree Project, in literature studies, methodology and report writing.

## Course literature

The entire course material that is distributed during the course is available on the course web page.

## Examination

- INL1 - Hand in Task, 4.5 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.

Written report and presentations at seminars.

## 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.