MF2075 Engineering Design Research Project 18.0 credits

Forskningsprojekt i industriell produktutveckling

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

Establishment

Course syllabus for MF2075 valid from Autumn 2015

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

You are qualified for first year Master studies and have passed the following courses (or the equivalent):

MF2070

For TIPUM track IPUA: EL1000 or EL1120, MF1017, MF1016, MF2047 or SD2125

For TIPUM track IPUB: MF2024, MF2010, MF2058

For TIPUM track IPUC: MF2030, MF2042, MF2043

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:

- Organise, lead and become a part of a technical and complex research project.
- Develop and follow a project plan including handling of possible deviations.
- Evaluate and apply scientific research methods that are relevant to the research project.
- Apply knowledge and skills from earlier courses and learn to acquire new knowledge and skills on request.
- Identify and learn knowledge that is relevant to the research project and summarise them in a literature study.
- Report the results in a coherent and well structured written report and an oral presentation
- Identify the most relevant publication forum (conference, magazine, workshop, etc) for the research project and formulate the project results in an proper scientific publication.
- Independently identify and formulate additional research issues that can be in focus for a temporary and individual future project (for example a full-time degree project).

Course contents

In this course apply knowledge from the studies on KTH in project work with research focus through a close cooperation with a research team at KTH. The research is directed towards one of three themes of Industrial product development : Machine Design, Mechatronics or Combustion Engine Technology.

By working as a member of a team you will learn to organise, handle, lead and become a participant of a technical and complex research project. This includes that you should be able to define your own project, make your own decisions and take initiative to ensure that the project is completed on time and in accordance with the project plan.

As a part of the research, you need to carry out a literature study to obtain new knowledge that is relevant to the research project.

The result of the work will have to be presented both orally and in different forms of written documentation.

Course literature

Course material and literature are available online.

Examination

- PRO4 - Project, 12.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO3 - Project, 6.0 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.

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.