



MF2063 Embedded Systems Design Project 9.0 credits

Inbyggda system projektkurs

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 MF2063 valid from Autumn 2012

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

This course is only available for students accepted for the Embedded Systems Master Programme (TEBSM).

IL2206

Language of instruction

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

Intended learning outcomes

After the course, each student should be able to:

- apply knowledge and skills from earlier courses, as well as learn to acquire new ones on demand;
- identify, compare and critically assess aspects of an engineering problem, towards making design decisions;
- use professional tools and processes necessary for the development of embedded systems;
- learn to get organised, manage, lead and become part of a cross technical and complex development project.

The student should after the course have good technical understanding, knowledge and skill in

- methods and tools for co-design and optimization of embedded systems;
- working through all aspects of an engineering development process;
- designing and implementing prototypes.

Being part of a larger engineering project, the student will learn how to

- apply a model-based development approach to embedded systems development;
- apply a fundamental test process;
- apply a requirements management method with considerations taken to the life-cycle concerns of embedded systems based products.

Course contents

The course focuses on product development of embedded systems in industrially relevant design projects. The ability to create embedded systems is primarily created by developing knowledge and skills in subjects such as software engineering, real-time programming, electronics engineering and distributed systems, complemented by application domain specific skills such as motion control, signal processing and human-machine interfaces.

The course is based on problem based learning and work in large projects, where the ability to engage in professional development while developing cooperation, communication and project management is practiced.

In the learning environment, team formation, teamwork and industrial collaboration are an integrated part. The student teams work in collaboration with industrial representatives to determine the specific factors that govern product requirements, design and realization. They focus on product-needs, design requirements, performance requirements and testing and validation.

Examination

- PRO1 - Project, 9.0 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.

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.