



EL2425 Automatic Control, Project Course, Smaller Course 7.5 credits

Reglerteknik, projektkurs, mindre kurs

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

Establishment

Course syllabus for EL2425 valid from Autumn 2015

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Electrical Engineering

Specific prerequisites

Automatic Control, Basic Course, (EL1000, EL1110, E1120, Reglerteknik allmän kurs) and at least one of

EL2520 Automatic control, Advanced course, or

EL2620 Nonlinear Control, or

EL2450 Hybrid and Embedded Control Systems.

Language of instruction

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

Intended learning outcomes

The overall purpose of the course is to give the student practical knowledge and experience of project work in design and implementation of control systems. The students get to consolidate their previously acquired knowledge in control theory by solving a problem on a laboratory system. The student also gets experience in project work and technical communication.

After the course the student should have the ability to:

- work effectively in a smaller project group
- systematically design, implement, test and demonstrate a prototype control system that meets given specifications
- use adequate engineering tools and methods and acquire new knowledge and skill when needed
- document and communicate results in written and oral presentations

Course contents

The majority of the work is project work in a small group of 2-4 students, dealing with:

- project planning
- control design
- modeling and simulation
- implementation of real-time control systems
- validation and test
- communication, documentation and demonstration

There might also be a number of compulsory workshops/tutorials, for example on the development tools that are used in the course.

Course literature

No specific list is given. The students are expected to find the necessary information themselves. Some background material, manuals and other documentation will be available, depending on the nature of the project task.

Examination

- PRO1 - Project, 7.5 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.

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

PRO1 . project, 7.5 credits, grade scale P/ F

Other requirements for final grade

The fulfilment of the course goals are examined by

- weekly project meetings
- documented project plan
- final presentation and demonstration
- final report and documentation
- self-evaluation

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.