EL2420 Automatic Control, Project Course 12.0 credits

Reglerteknik, projektkurs

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

Establishment

Grading scale

P, F

Education cycle

Second cycle

Main field of study

Electrical Engineering

Specific prerequisites

Language of instruction

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

Intended learning outcomes

The student should after the course be able to work in control related projects. He/she should be able to do modelling, control design, analysis and implementation of a control system for laboratory process.

In particular, the students should be able to:

- Do collaborative work in a group.
- Write a project plan
- Model and simulate a laboratory process
- Design a control systems that meets given specifications
- Implement the control system in a real time computer system like LabView
- Give oral project presents the project and design a poster
- Write a project report.

Course contents

The course consists of a project, where the students design and implement a control system on a physical system. Given specifications should be satisfied. The work can be divided into three phases:

- Physical and experimental modelling;
- Controller design, analysis and simulation;
- Implementation in a real time control system;
- The work is done in small groups and is documented in a report and an oral presentation at a seminar.

Course literature

Notes from the department

Examination

- PRO1 - Project, 12.0 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.

Other requirements for final grade

The group should
deliver project plan
pass the halftime review
deliver a control system which meets given specifications
give an oral presentation and a poster at a seminar.
deliver a final project report

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.