



MG1002 Automation Technology 6.0 credits

Automatiseringsteknik

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

Establishment

Course syllabus for MG1002 valid from Spring 2020

Grading scale

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

Education cycle

First cycle

Main field of study

Mechanical Engineering, Technology

Specific prerequisites

MF1016 Electrical engineering

or the equivalent

The Swedish B and English A or the equivalent

Language of instruction

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

Intended learning outcomes

After completing the course with a passing grade the student should be able to:

- use correct terminology define concepts describe function and properties of included components in automation
- account for general principles, methods and equipment for control and automation- how they function how they are used and programmed including industrial robots
- in a systematic way describe course of events in a manufacturing device, retrieve logical solutions and control graphs, as well as prepare appropriate PLC programs in codeSys
- choose suitable components for the current application such as actuators, sensors, control systems and industrial communication equipment
- design, program and deploy simple automatic equipment where processing, material handling, assembly, coordination and supervision are included in the control tasks

Course contents

The course covers the subareas:

- The bases of automation technology
- Descriptions of courses of events
- PLC technology
- Sensors and actuators used in manufacturing industry
- ·Introduction to assembly technology- feeders, joining, DFA
- Use of robots
- Material handling

Course literature

Lecture notes and a compendium can be downloaded from Canvas by registered course participants.

Examination

- TEN1 - Written exam, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 3.0 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.

Students who have not completed course with earlier set of assessment items should follow the current assessment format.

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.