



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 2018

Grading scale

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

Education cycle

First cycle

Main field of study

Mechanical Engineering, Technology

Specific prerequisites

MF1016 Basic Electrical Engineering

or the equivalent

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 passing the course, you should be able to:

- describe the general principles, methods and equipment for control and automation
- select components suitable for the application, such as actuators, sensors and control systems
- design, program and implement simple automated installations
- explain the usage of production machinery and equipment in manufacturing industries, and propose how productivity can be improved by automation
- describe how industrial robots work, and how they are utilized and programmed
- describe the technique of combining components into automated systems, where machining, handling, coordination, supervision, assembly and quality inspection are activities to be controlled
- take into consideration the environmental, human and economical preconditions for the design and use of the systems

Course contents

Structure, control, programming, deployment and use of automated systems, with a focus on production equipment in manufacturing industry.

Course literature

Available via LMS for students admitted to the course

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.

Other requirements for final grade

Approved lab work (LAB1; 3 cr)

Passed written exam (TEN1; 3 cr)

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.