MG2013 Advanced Welding Technology, Modulus 1 6.0 credits

Svetsteknologi, högre kurs, modul 1

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 MG2013 valid from Spring 2012

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

MG1010 Introductory Welding Technology, general course
MG1011 Introductory Welding Technology, advanced course
MG1012 Non-Destructive Testing

or corresponding

Language of instruction

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

Intended learning outcomes

Upon completion of this course the student will have

- deeper knowledge of structural parts and constructions
- knowledge of fundamental physical background of welding arcs
- knowledge of advantages and disadvantages of welding machines in different situations
- knowledge of advantages and disadvantages of systems for flexible welding with robots
- deeper knowledge of control and quality checks, during the welding process and after completing it
- ability to accomplish an optimized choice of material, additive, weld parameters etc. including optimization of quality and costs ability to formulate new standards, rules an procedure specifications for welded constructions
- ability to formulate new standards, rules and prescriptions regarding welded elements

Course contents

Welding Processes, mechanization and automation

Welding Economics.

Work Environment with welding

Metrology

Disposition

The classes are mainly concentrated to two full days of studies, in average every second week during two months . In between classes, homework assignments and preparation work have to be completed. High degree of attendance to classes is required.

Course literature

"Karlebo Svetshandbok (K Weman; In Swedish),

"Hälsa och säkerhet vid svetsning" (K Weman; In Swedish),

and handouts distributed during the course.

Examination

- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, F
- TEN1 - Written exam, 3.0 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.

Other requirements for final grade

Written examination (TEN1; 1,5 credits)
Lab work (LAB1; 3 credits)
Exercises (ÖVN1; 1,5 credits).

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.