MG2040 Assembly Technology 6.0 credits

Monteringsteknik

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 MG2040 valid from Spring 2015

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

MG1026 Manufacturing Technology or

MG1006 Design and Product Realization - Manufacturing or

the equivalent knowledge

Language of instruction

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

Intended learning outcomes

After the course, the students should be able to:

• describe the role of the assembly process within the manufacturing domain and discuss its importance

• create mathematical and feature models of assemblies and use them in context of design and evaluation of assembly systems

• account for the dynamic and static constraints of a manual or automatic assembly process

• analyse a given product and define feasible assembly sequences

• choose the best sequence by applying technical and economical criteria

• describe the function of all the elements of an assembly system (both automatic and manual)

• evaluate the impact of the product design on the assembly process, by applying the Boothroyd DFA methodologies

• identify the requirements on design of an assembly station and provide instructions for the subsequent implementation

• calculate the costs and the most important economical key performance indicators (KPIs) for standard assembly systems (both manual and automatic)

Course contents

The aim of the course is to give the students tools, knowledge and practical experience of industrial assembly technology and its effect on the design of the product as well as its economical effect on the production as a whole

Course literature

"Mechanical Assermblies"; D.E. Whitney, Oxford Series on Advanced Manufacturing; Oxford University Press

Övrigt kursmaterial distribueras via Bilda/Other course material will be distributed via Bilda

Examination

• PRO1 - Project, - credits, grading scale: P, F

- TEN1 - Written exam, 6.0 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

PRO1 - Project within Assembly Technology

TEN1 - Written examination

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.