HE1006 Design Methods 7.5 credits

Designmetodik

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

Establishment

Course syllabus for HE1006 valid from Autumn 2007

Grading scale

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

Education cycle

First cycle

Main field of study

Mechanical Engineering, Technology

Specific prerequisites

Basic knowledge about project oriented methods equivalent to the course HN1900 Engineering and Information Skills.

Language of instruction

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

Intended learning outcomes

The aim of the course is to a give a comprehensive view and basic knowledge about different methods in the production development process.

The course should give the student enough skill to use the working methods of an engineer for product development.

After completing this course the students should

- be able to describe the different phases in the product development work
- master different tools for analysis of elements which gives an overall view of the product
- understand the problem and be able to translate demands from customers to measurable criteria for draft phase
- understand the need for quality assurance in the development process
- be able to use a decision matrix for evaluation of drafts
- be able to document ideas using sketches or CAD
- know how to protect ideas and products (patent, registration of designs, copyright and proprietorship

Course contents

- Product development process
- Sketch technique
- CAD
- Generating of ideas
- Different modern engineering methods
- Basic knowledge of quality assurance
- Exercises with relevant problems in production development work

Course literature

CAD-delen: kompendier från KTH Syd

Rekommenderas:
Forsman, Daniel: Konstruera med Pro/ENGINEER, WF 3.0, Studentlitteratur

Examination

- ÖVN1 - Exercise, 4.5 credits, grading scale: P, F
- TEN1 - Examination, 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.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

Passed exercises (ÖVN1, 4,5 cr)
Passed exam (TEN1, 3 cr), credit rate A-F
In total, credit rate A-F

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.