MF1061 Introduction to Design and Product Realisation 9.0 credits

Introduktion till design och produktframtagning

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

Establishment

Course syllabus for MF1061 valid from Autumn 2015

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Compulsory for CDEPR school year 1.

Language of instruction

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

Intended learning outcomes

On completion of the course, the student should:

- have knowledge of the working methodology in a product realization process and the engineer's role.
- be familiar with the importance of industrial design in a product development process, and working methods for design, visualisation and creation of models.
- be able to use some engineering computer tool, especially CAD, to make 3D models for visual communication and manufacturing drawings.
- have experience of working in small groups and in larger project groups with formal project meetings and distribution of tasks, following a process.
- understand the structure of a technical report and have trained language and content aspects of a technical report.
- be able to plan and carry out oral presentations.
- have knowledge of the concept of sustainable development.

Course contents

The course starts with a design part that consists of exercises in sketching, modelling and morphology. In parallel, a CAD tool is introduced.

A large part of the course consists of a project work. The project goes out on to design a new or improve an existing product. Aspects that form, function and production should be observed. The product idea should then be illustrated with physical and virtual models. The project starts with a kick-off with exercises in project work.

The aim of the project work is to obtain a wider context for, and perspective on design and product realization.

In parallel with the project, the field of sustainable development is introduced, with the aim to understand and be able to reflect critically.

Disposition

In the course, Exercises and laboratory sessions that intend to give skills within fields as sketch are included modelling, morphology and CAD . the exercises be interleaved with lectures within respective field.

The project work be supported apart from via supervision through lectures, exercises and laboratory sessions.

In this part sustainable development includes lectures, exercises in the form of game and reflecting seminars.

The examination takes place continuously with oral and written presentations of project and laboratory sessions and be completed with a written examination.

Course literature

Course material that includes e.g. written communication, the product realization process, CAD and sustainable development.

Examination

- PRO2 - Project, 2.0 credits, grading scale: P, F
- INL2 - Hand in Task, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN2 - Written examination, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- KON1 - Test, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- INL3 - Hand in Task, 2.0 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.

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.