



MF2112 Advanced Product Design 12.0 credits

Avancerad produktdesign

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

Establishment

On 2022-10-15, the Dean of the ITM School has decided to establish this official course syllabus to apply from spring term 2023 (registration number M-2022-1466).

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

MF2038 Service Design 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, the students should be able to:

1. Plan and carry out a study in Human Centered Design (HCD), analyse the result and create understanding that is relevant for the design of products and services.
2. Describe and reflect on current theories, methods and procedures in HCD, branding and design research and relate these to your project.
3. Analyse a trademark and develop a Product Design Guidelines intended to support the design of products and services.
4. Design a complex product that demonstrates a well balanced balance between understanding from Human Centered Design application of Product Design Guidelines and consideration to sustainable development.
5. Relate to the advantages and the challenges with circular economy and in a creative way apply these in a system of products and services.

Course contents

The course is mainly directed towards training of different skills in product design.

The content revolves around an individual design project where the background studies are carried out in groups. In the project, the different parts should then be balanced and shaped to a whole.

The sustainability aspect is included, as the product is designed to function in a product-service system in a circular economy.

Furthermore, current research in the field of industrial design is discussed in seminars.

In the first item of the course, different methods and tools in user-centred design are trained. Here, the user's needs are investigated, regarding ergonomics, handling and functionality, through several different supplementary methods.

The next item deal with the importance of the trademark, strategies around development of trademarks and how it influences the design of products and services.

In the final item, the parts are put together in an individual project where a product is designed and visualised with regard to both the user studies and the trademark development.

The course is carried out in project form, which is a practical item that requires attendance and active commitment of the students and including interaction with the teachers through supervision.

Examination

- PRO2 - Project, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- INL1 - Hand in exercises, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- INL2 - Hand-in assignment, 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.

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.