



ML1213 Product Development and Design 15.0 credits

Produktutveckling och konstruktion

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

Establishment

The official course syllabus is valid from the autumn semester 2025 as decided by the Faculty Board: HS-2025-0013. Date of decision: 2025-06-09

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

- Completed courses: ML1110, ML1200 and ML1209
- Approved module TEN2 in ML1101

Intended learning outcomes

- Describe the working methods and professional roles of industrial designers, design engineers and product developers in product development project

- Develop ideas by means of component and product prototypes in physical form, based on sketches using digital models
- Carry out common image processing operations, create animations and developing presentation material using text and image
- Discuss and use project plans, methods and support methods for project and product development, and account for and carry out the phases included in a product development project
- Together with other students carry out product development projects in a reflective, sustainable, quality considerate and responsible way
- Account for how ideas and products can be protected (patents, protection of designs, copyright and property rights)

Course contents

This course presents to the student a generic, iterative project-based process that is used to manage the execution of new product development. The process builds on knowledge from previous project courses and extends the student's basic knowledge in computer aided design and engineering software applications. What is unique in this specialization course is the development, design and engineering of a product concept that requires the communication and presentation of results from decisions in a variety of forms; verbally, illustratively, textually, physically (i.e. 3D printing and physical modeling) and virtually (i.e. in digital animations).

Examination

- PRO1 - Project work, 8.0 credits, grading scale: A, B, C, D, E, FX, F
- PDX1 - Examination, 1.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written examination, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 1.0 credits, grading scale: P, F
- INL1 - Hand in exercise, 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.