



# ML1213 Product Development and Design 15.0 credits

## Produktutveckling och konstruktion

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 ML1213 valid from Spring 2019

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

Finished courses ML1110 ML1209 ML1101 ML1309 and ML1200, or the equivalent courses, with a Pass grade

## Language of instruction

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

## 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

- Design and product development methodology
- Colour and shape in design
- Computer support for engineering (Advanced CAD)
- Computer support for design (Surface Modelling)
- Presentation techniques
- Physical prototyping and free form fabrication (3D printing)
- Rendering, visualisation and animation

## Course literature

Åsa Wikberg Nilsson, Åsa Ericson och Peter Törelind, Design: Process och metod, studentlitteratur AB, ISBN: 978-91-44-10885-8

Karl T. Ulrich och Steven D. Eppinger, Produktutveckling: Konstruktion och design, Studentlitteratur AB, ISBN 978-91-44-07421-4

Roger Toogood, Creo Parametric 4.0: Advanced Tutorial, SDC Publications, ISBN 978-1-63057-097-2

## Examination

- INL1 - Hand in exercise, 3.0 credits, grading scale: A, B, C, D, E, FX, F

- PDX1 - Examination, 1.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project work, 8.0 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

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

Pass all course modules.

## 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.