



# ML1108 Decision Models and Impact Assessment 7.5 credits

## Beslutsmodeller och konsekvensbeskrivning

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 ML1108 valid from Spring 2019

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

Completed courses ML1200 and ML1110 or the equivalent, as well as completed items TENL and Å–VN1 in ML1111 or the equivalent.

## 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, student with a Pass grade should be able to:

- Choose and use decision models for production and design from given preconditions
- Produce relevant criteria and make consistent decisions for production and design of a product
- Account for current regulatory frameworks and control documents for sustainable development relevant for production and product development
- Illustrate and discuss current challenges connected to sustainable development in production and product development
- Argue for an ethical position about sustainability and the engineering role from different perspectives
- Discuss a product's/design's expression based on the societal norms regarding JML (gender equality, diversity and equality of treatment)

## Course contents

- Decision models, among other QFD (Quality Function Deployment), Pugh, FMEA (Failure Mode and Effects Analysis) and Kesselring
- Introduction to ethics/moral philosophy
- Introduction to gender equality and equality of treatment, connected to design and product development
- Current regulatory frameworks and control documents for sustainable development relevant for production and product development

## Disposition

The students are expected to work actively and independently with the course material as well as to reflect on their own ethical positions and that of others.

Lectures and exercises support the students in their knowledge acquisition and development of skills

## Course literature

Meddelas 10 veckor före kursstart

## Examination

- INL1 - Assignment, 1.0 credits, grading scale: P, F
- KON1 - Test, 1.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written examination, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 1.5 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.

## **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.