



MG2201 Design and Process Modelling 7.5 credits

Design and Process Modelling

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

Establishment

Course syllabus for MG2201 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Language of instruction

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

Intended learning outcomes

Analysis of the diversity of process models currently being used in design project support.
The objectives are to

- Define the needs for design process support
- Understand the techniques available to provide support
- Understand the scope of types of design process models
- Study current academic and commercial attempts to develop and use such tools

Course contents

Course outline:

Concurrent engineering

Define Process Vision & Project Scope

Understanding process components

Capturing Process Knowledge

Modeling Current Process

Modeling Process

Business Process Modeling Techniques

Measuring Processes

Measuring Process

Analyzing Processes

Analysing a Process

Creating New Processes

Designing New Processes

Validating New Processes

Concurrent engineering. Creativity and the design process- User needs. Market analysis- Product Design Specification PDS- Functional decomposition- QFD House of Quality- Axiomatic Design- Taguchi Robust design, - Design and manufacturing - DFX- Decision Based Design

Examination

- INL1 - Assignment, 3.0 credits, grading scale: P, F
- TEN1 - Examination, 4.5 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.

Other requirements for final grade

Assignments (INL1; 3 cr)

Exam (TEN1; 4,5 cr)

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.