MF2036 Integrated Product Development, Advanced Course 24.0 credits

Integrerad produktutveckling högre kurs

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

Establishment

Course syllabus for MF2036 valid from Spring 2011

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Accepted for the track IPDB

Min 130 hp, MF111X/MF112X/MF114X eller motsvarande.

Master: TIPDM track IPDB

Language of instruction

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

Intended learning outcomes

Plan and implement a project organization and when necessary change this organization to suit the phases in the product development project.

Create and implement a project plan

Apply support methods for systematic and efficient product development work.

Motivate the applicability of various support methods.

Motivate the phases and gates in the product development cycle.

Manage and approach technical problems that are vague and ambiguous.

Develop various technical skills

Independently gather relevant data in order to solve technical and organizational problems.

Apply IPU research (PPM, PSS, Creativity, Innovation, Decision, etc)

Orally and in writing be able to communicate:

  various aspects of product development

  reflections on personal and collective behaviour and relate this to group dynamics.

  reflections on the progress of the project

Course contents

Group assignments will be carried out in the form of creating a creative idea, learning to apply support methods in various phases of the product development cycle, and project organisation in product development work. These assignments will be presented at seminaries where the students learn and get feedback from each other.

In a team of 13 students and togeter with an industry partner carry out a product development project, from idéa to finished prototype.

In addition to applying engineering skills, the course emphasises user evolvement, entrepreneurship, busienss administration and strategy, leadership and orgaisation, group dynamics, empowerment and creativeness.

Course literature

PRODUCT DESIGN AND DEVELOPMENT, Ulrich & Eppinger

Course material will also be handed out to the students during the course.

Examination

- PRO2 - Project II, 8.0 credits, grading scale: P, F
- PRO1 - Project I, 8.0 credits, grading scale: P, F
- PRO3 - Project III, 8.0 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.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

- The grade is based on a generall assessment of performance in relation to the learning goals. This evaluation makes up 70% of the final grade in the course.

- Examination is made by oral presentations, reports, and peer-to-peer evaluations. The course requires the students to write a weekly reflection regarding their individual and collective work experiences (the log), and two term papers (Lessons Learned) on this topic. An exam is held in the end of period 3.

- A part of the course (2 p) is examined in the beginning of the course through the assessment of a product specification and analysis of, for the project, suitable support methods.

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.