MF2088 Innovation and Product Development 22.5 credits

Innovation och produktutveckling

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 MF2088 valid from Autumn 2018

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

A Degree of Bachelor in mechanical engineering or the equivalent.
Furthermore the courses MF2084 Managing research and development, MF2046 Product innovation, MF2085 Innovation and product development processes, or courses with equivalent contents.

Admitted to TIPDM (school year 2) - track IPDE.

Language of instruction

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

Intended learning outcomes

After passing the course, the students should be able to:

- independently and actively lead, plan and work in innovative development projects that are carried out by a project group and critically develop and adapt working methods based on the nature of the assignment, and research
- be able to tackle complex (vague, ambiguous) innovation related challenges in a technical and commercial context in a structured way
- independently and critically be able to choose and apply research-based work procedures, tools, methods and analytical frameworks related to innovation and development work
- clearly justify innovation solutions and the decisions that have led to the solutions, based on both a value creation and a technical perspective
- write legitimate business plans and project plans based on the nature of a project
- communicate his/her innovation work and its results in oral and written presentations for various types of target groups
- be able to constructively criticize his/her own project group and the efforts of other groups (and individuals), to create a good innovative working environment, project organisation and planning and to critically review innovation solutions
- reflect about and consider sustainable development in innovation/product development work
- critically reflect and learn lessons from innovation work, based on research and his/her own experience

Course contents

In the course, a real innovation and product development project is carried out in collaboration with an employer, or a student initiated development project. The work is carried out in groups, and in the course the work is supported through seminars on for example design thinking, Business Model Canvas and industrialisation. In the course, there are also seminars where the organisation and management of the projects are discussed and critically reviewed, as well as seminars about progress in innovation and product development.

Course literature

Will be announced at the beginning of the course.

Examination

- INL1 - Hand in Exercise, 7.0 credits, grading scale: A, B, C, D, E, FX, F
- INL2 - Hand in Exercise, 7.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project, 8.5 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.

Grading criteria are handed out at the beginning of the course.

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.