MF2088 Innovation and Product Development 22.5 credits

Innovation och produktutveckling

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

Establishment

On 04/21/2020, the Dean of the ITM School has decided to establish this official course syllabus to apply from spring term 2020 (registration number M-2020-0790).

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Innovation technology according to the course M**F2046 Product innovation.** Innovation och product development processes according to the contents of the course **MF2085 Innovation- and Product Development Processes**, and the corresponding course **MF2084 Management of Research and Development**

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 student should be able to:

Innovation process: LM1: Design, apply, evaluate and adapt processes and working methods to handle complex (vague, ambiguous) innovation projects.

LM2: Use methods to handle social factors in project teams.

LM3: Analyse and evaluate ones own practical implementation of innovation work and put it in relation to research.

Innovation deliveries: LM4: Develop, justify, evaluate and communicate business models and business plans.

LM5: Develop, justify, evaluate and communicate solution proposals in the form of concepts and prototypes.

LM6: Analyse and evaluate innovation solutions based on economic, environmental and social sustainability.

Course contents

In the course, a real innovation and product development project in collaboration with a sponsor, or a student initiated development project, is carried out. The work is carried out in groups, and in the course, the work is supported through seminars and supervision, with focus on both the process and deliveries. The students design their innovation process and organisation themselves, based on their innovation challenge utilising documented working methods in innovation work. Examples of methods are design thinking, lean start-up and triple layered business model canvas. The deliveries in the course is that the students develop business models, business plans and included solution in the form of concepts and prototypes.

In the course, seminars are are also carried out, where organisation and management of the projects are discussed and critically reviewed, as well as seminars about the progress in the innovation and product development solutions.

Examination

- PRO2 - Project, 9.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO3 - Project, 9.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO4 - Project, 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.

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

Other requirements for final grade

A Pass grade for the entire course requires 80% participation in seminars and active participation in the project. It is also required that assignments are carried out, that are expected in the different examination parts.

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.