



# MF2084 Managing Research and Development 6.0 credits

Ledning av forskning och utveckling

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

## Establishment

Course syllabus for MF2084 valid from Autumn 2016

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Mechanical Engineering

## Specific prerequisites

The course is open for first or second year Master students. The course is compulsory for students who follow the track Innovation Management and Product Development of the Master programme (120 credits) in Integrated Product Design.

## 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:

- describe how theory related to strategy and organisation have been developed over time
- use basic concepts, theories and analytical frameworks related to strategy and organisation
- analyse the interplay between research and development and various types of overall business and company strategies and their influence when it comes to how a company should organise its development activities
- show knowledge of different ways to organise companies on, and how these structures relate to overall business and company strategies and leadership
- understand advantages and disadvantages when it comes to different ways to organise and lead research and development
- show knowledge of different economic models for management of research and development
- show knowledge of relevant aspects on distributed research and development and on business and value driven research and development and lean research and development
- show knowledge of advantages and disadvantages related to outsourcing and offshoring of research and development activities
- show knowledge of different integration mechanisms that can be used when research and development is organised
- design product portfolios
- understand advantages and disadvantages of product platforms and modularisation, as well as the surrounding factors that influence their use

## Course contents

- Different theories and frameworks related to strategy
- Strategies at different levels in a company; e.g. research and development, overall business and company strategies
- Research and development strategy and leadership
- Organizational theory and organizational design
- Organisation and management of research and development
- Product portfolios and product strategies
- Product families, platforms and modularisation

â€¢ Lean research and development

## Course literature

Will be announced at the beginning of the course.

## Examination

- PRO1 - Project, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Exam, 4.0 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.

The examination is based on the results of written examination and of the project work.

The grading is done according to the following:

â€¢ Written examination, (4 credits)

â€¢ Project Work (2 credits)

The grading scale for both the written examination and the project work are: A, B, C, D, E, FX, F. The course grade is given by calculating the weighted average of the grades for the written examination and for the project work

## 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.