



## Course syllabus

Faculty of Technology

Department of Mechanical Engineering

2MT013 Produktutveckling, 7,5 högskolepoäng

Product development, 7.5 credits

### **Main field of study**

Mechanical Engineering

### **Subject Group**

Mechanical Engineering

### **Level of classification**

First Level

### **Progression**

G2F

### **Date of Ratification**

Approved by Faculty of Technology 2014-10-03

The course syllabus is valid from autumn semester 2015

### **Prerequisites**

60 credits in the subject of Mechanical Engineering.

## Objectives

After the course finishing, the student will be able to:

- use the concept of product development process for successful product engineering,
- apply a sequence of logical steps- starting with understanding the need, defining the functional requirements, and following the dependencies between functions and structure to implement the best design,
- communicate within and outside the team by managing the product development project.

## Content

The course presents theories and practices related to product development, and how it is formed in a process that makes the “backbone” of all development and design/construction work.

Principles of systems thinking will be used, particularly how a system is defined by requirements management, concept development and design of system architecture.

Finally, the comprehensive process forms by a typical project model with different phases, where gates and decision points are presented. The theory is delivered through lectures parallel with project works where the students apply it. A continued training in report writing and oral presentations are included in the course.

## Type of Instruction

The course is presented through lectures and students' skills trained by execution of a joint course projects and individual assignments.

### Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

The assessment of student performances usually takes place during special examination periods, and can be in oral and/or written form. Submission of exercise reports is also a possible form of examination.

### Course Evaluation

A course evaluation will be carried out and compiled after the course is completed. The compilation will be presented to the current board as well as to the students and filed.

### Credit Overlap

This course cannot be part of a degree in combination with another course in which the content fully or partly correspond to the content of this course: 2MT010 Product development, 7,5 hec.

### Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

The course is given in English if there are international students.

### Required Reading and Additional Study Material

#### **Required Reading**

Jackson, Peter L. *Getting Design Right – a systems approach* (2010). CRC Press, USA, 366 pages.

Teachers' Notes

#### **Reference literature**

Ulrich, K and Eppinger, S. *Product design and development* (2012) Mc Graw Hill

Relevant research articles and other publications.