Syllabus for

Academic year 2010/2011 >

MMT015 - Product requirements engineering

Syllabus adopted 2010-02-10 by Head of Programme (or corresponding)
Owner: TKDES
6,0 Credits
Grading: TH - Five, Four, Three, Not passed
Education cycle: First-cycle
Major subject: Industrial Design Engineering
Department: 44 - PRODUCT AND PRODUCTION DEVELOPMENT

Teaching language: Swedish

Credit distribution

Course module	Sp1	Sp2	Sp3	Sp4	Summer course	Examination dates
0100 Examination 6,0 c Grading: TH		6,0 c				Contact examiner

In programs
TKDES INDUSTRIAL DESIGN ENGINEERING, Year 2 (compulsory)

Examiner:
Univ lektor Pontus Wallgren
Professor MariAnne Karlsson

Course evaluation:
https://document.chalmers.se/doc/507821744

Eligibility:
For single subject courses within Chalmers programmes the same eligibility requirements apply, as to the programme(s) that the course is part of.

Course specific prerequisites
No specific prerequisites

Aim
The aim of the course is that the student should develop knowledge on processes and methods for identifying, analysing and describing customers'/users' requirements for product functions and properties. The course intends to provide the student with opportunities to practice how to carry out a study in order to map customers'/users' needs and requirements for technical products.

Learning outcomes *(after completion of the course the student should be able to)*
After completing the course, the student should be able to
- describe the different phases of a generic process for gathering and analysing customers'/users' needs and requirements;
- describe the fundamental principles for planning and executing a study of customers'/users' needs and requirements for a technical product/technical system;
- plan a so called "user study";
- choose, in a conscious way, between different methods for data collection and analysis. This means that the student should:
- be able to describe and explain similarities and differences between different question based and observation based methods respectively;
- be able to explain which methods generate which type of information;
- be able to describe some fundamental approaches to analysing quantitative and qualitative data
- be able to provide relevant arguments for the choices made
- analyse information/data and on basis of the information/data be able to draw conclusions of relevance for product design;
- on basis of a problem analysis, formulate a specification of requirements, in customer/user terms, for a product/technical solution;
- communicate the execution as well as the results from the customer/user study to a mixed audience

Content
The course will cover the following topics:
- different perspectives in new product development;
- the user centred product development process;
- the theoretical bases for the mapping of needs and requirements;
- the concept of need;
- the accessibility of different types of requirements;

- methods and methodologies for mapping customers'/users' needs and requirements;
- mediating tools, product representations and their role in the dialogue between customer/user and product developer/ designer;
- analysis and representation of information for communication

Organisation

The course is organised as lectures/seminars, literature studies and a project.

Examination

Examination is based on an individual written (short) exam and a project. The individual written exam will result in a grade Fail, or 3, 4, or 5. The project will result in a grade Fail, or 3, 4, or 5. The final grade is based on the result of the individual exam and the result of the project.