

SYLLABUS

Theory, processes and methods for product development 7.5 credits M7023T

Teori, processer och metoder för teknisk produktutveckling

Course syllabus admitted: Spring 2016 Sp 3 - Spring 2017 Sp 4

**DECISION DATE
2015-11-06**

Theory, processes and methods for product development 7.5 credits M7023T

Teori, processer och metoder för teknisk produktutveckling

Second cycle, M7023T

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Datorstödd maskinkonstruktion	Mechanical Engineering

Entry requirements

Sufficient knowledge depth within the area of engineering sciences. Knowledge in engineering design, production/manufacturing techniques, and computer supported tools for product development corresponding to the content of the course M0010T-Computer Aided Design.

Selection

The selection is based on 30-285 credits

Examiner

Magnus Karlberg

Course Aim

After having completed the course the student will be able to apply, analyse and reflect over theory, processes and methods of product development.

After having completed the course the student will have acquired insight into, and capacity to reflect over, the requirements and demands of various project disciplines within product development. Further, the student will get insight into, as well as be able to apply scientific report writing.

After having completed the course the student will be able to relate to business models, development processes, production/manufacturing and product life-cycles as well as participate in the further development of these.

Contents

- Products and Product Development Processes in Relation to Product Lifecycle (3.5 ECTS)
Project management, project organisation, project follow-up and project risks
Requirements during product lifecycle
Needs and requirements analysis, idea/concept generation, modelling & simulation, concept generation & selection, also in relation to production & manufacturing
Detailed design and prototyping
- Production & Manufacturing (2 ECTS)
Product development in relation to production planning and production capacity
- Company business models in relation to product development (2 ECTS)
Combinations of products and services
Payment alternatives
IPR and business risks

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Lectures, tutorials, project work.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided. Approved project work, including oral presentations and written reports.

Remarks

The course can not be included in a degree together with M7015T.

Overlap

The course M7023T is equal to M7028T

Literature. Valid from Autumn 2012 Sp 1

Product Design and Development, Karl T. Ulrich & Steven D. Eppinger. Complementary material will be distributed as required per project.

Course offered by

Department of Engineering Sciences and Mathematics

Items/credits

Number	Type	Credits	Grade
0001	Project Work	7.5	G U 3 4 5

Last revised

by HUL Mats Näsström 2015-11-06

Syllabus established

by Dept. TVM Mats Näsström 2012-03-14