

SYLLABUS

SIRIUS - Creative Product Development 22.5 credits M7017T

SIRIUS - Kreativ produktframtagning

Course syllabus admitted: Autumn 2023 Sp 1 - Present

**DECISION DATE
2021-02-17**

SIRIUS - Creative Product Development 22.5 credits M7017T

SIRIUS - Kreativ produktframtagning

Second cycle, M7017T

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

Entry requirements

Courses summing up to 180 credits with sufficient depth within the areas that are deemed important for the product development project, which the participant aims to take part in. Important knowledge in product development corresponding to the content in M7018T, M7011T and M7028T.

Selection

The selection is based on 30-285 credits

Course Aim

After completing the course the student shall be able to:

1. Knowledge and understanding

- explain how structured and creative product development is utilized in modern manufacturing industry.
- explain creative product development methods, computer aided design, simulation in product development and project management.
- describe how sustainability aspects (gender equality included) in the field of mechanical engineering, how these aspects relate to society and research that addresses these challenges.

2. Skill and ability

- apply product development methodology - from planning and need analysis, through concept generation and concept selection to final development of prototypes.
- document and reflect on both your own and the project teams learning process and be able to use this new knowledge in product development projects.
- apply insights on sustainability aspects (gender equality included) when implementing product development projects in mechanical engineering.

3. Valuation and attitude

- evaluate the significance of various sustainability aspects (gender equality included) in the implementation of product development projects in mechanical engineering.

Contents

Participants work in groups, going from needs to finished product (or prototype) in close collaboration with industry partners – with the aim to gain understanding and experience of today's and tomorrow's ways of working in integrated product development projects.

Realization

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

The course normally offers 3-6 projects with 4-12 participants in each project team. Every team is supervised by at least one coach (teacher). The coaches' work is aimed at providing support and structure to the students' own learning processes within each product development project.

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. The product development project is presented in written reports, individual logbooks, verbal presentations and at final presentations at LTU and, when applicable, at the industry partner site. The teachers will further carry out verbal design reviews and individual interviews. The final grade is a combination of the above and the participants' contributions to the product development projects.

Unauthorized aids during exams and assessments

If a student, by using unauthorized aids, tries to mislead during an exam or when a study performance is to be assessed, disciplinary measures may be taken. The term "unauthorized aids" refers to aids that the teacher has not previously specified as permissible aids and that may assist in solving the examination task. This means that all aids not specified as permissible are prohibited. The Swedish version has interpretative precedence in the event of a conflict.

Remarks

Communication: Canvas is used for internal and external communication. Studios and workplaces for distance-spanning work are also used internally and for collaboration with industry partners.

Knowledge in product development methodology is important. In addition, knowledge in mechanical design, production engineering and computer aids form product development, corresponding to the content in M0010T Computer aided design is desirable. The course requires that participants are able to, on their own and in groups, solve problems and to plan and carry out all phases in a product development project carried out in close collaboration with industry partners..

Cannot be included in the degree together with M7004T, M7029T or T7026T.

Overlap

The course M7017T is equal to M7029T, T7026T, M7004T

2113

Course offered by

Department of Engineering Sciences and Mathematics

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Project work	G U 3 4 5	22.5	Mandatory	A08	

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Head Faculty Programme Director Niklas Lehto 2021-02-17

Syllabus established

The syllabus was established by the Department of Applied Physics and Mechanical Engineering 2007-12-17, and remains valid from autumn 2008.