Computers as Design Tools

Programme course

6 credits

Datorn som designverktyg

TMKT59

Valid from: 2017 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2017-01-25

Main field of study
Product Development, Mechanical Engineering

Course level
First cycle

Advancement level
G2X

Course offered for
- Design and Product Development
- Mechanical Engineering, M Sc in Engineering

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Intended learning outcomes
The purpose of the course is to provide good skills in how to use the computer as a design tool during the design process. The ability to create 3D-modells using various computer programs is the most important ingredients. The student will after completed course;

- have knowledge of how the computer can be used as design and construction tool in the design process.
- gained the ability to use wide range of computer programs in combination with other aids for visual representation.
- being able to construct complex models using CAD-program.
- have the ability to analyze and evaluate design qualities on a conceptual level.
- show an experimental attitude were the computer tool is integrated.

Course content
Three dimensional CAD program for design purposes. Object based graphic programs. Sketching and presentation techniques. The design project includes a total product based on the man-machine interaction. During the design project the team will deal with the products design, production capability, esthetics, practical function, etc.

Teaching and working methods

The course runs over the entire spring semester. Lectures and seminars treat important parts of the course and follows up with laboratory tutorials. The course ends up with a project were the different contents are demonstrated.
The course runs over the entire semester.

Examination

PRA1	Project assignment	6 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Peter Hallberg

Examiner

Mats Nåbo

Course website and other links

Education components

Preliminary scheduled hours: 34 h
Recommended self-study hours: 126 h

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.