Industrial Design

Programme course

6 credits

Industridesign

TMKA03

Valid from: 2017 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2017-01-25

Main field of study
Mechanical Engineering

Course level
First cycle

Advancement level
G2X

Course offered for
- Mechanical Engineering, M Sc in Engineering
- Industrial Engineering and Management - International, M Sc in Engineering
- Industrial Engineering and Management, 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.

Prerequisites
Courses in mechanical engineering from the earlier years of the programme

Intended learning outcomes
The course shall give basic knowledge about industrial design, as a concept and as a professional activity. The interaction Man-Product and the design process are the most important ingredients. The student will after completed course;

- understand and be able to describe the basic elements in the area of design.
- show or present the different contents, extent and constraints of the design work.
- have knowledge about basic ergonomics and different methods to increase products usability.
- furthermore have knowledge about form, color and other product characteristics that can influence the aesthetic expression and being able to visualize ideas and to understand the visual language possibilities.
- being able to handle the different steps in the design process and create relevant concepts that will give the product an added value.
- have the ability to create ideas using different techniques.
- specify and evaluate the different qualities in products.

Course content

Industrial design as a concept and as a professional activity. Design methods. The project follows the design process, from generating of ideas to creating concepts. This includes brainstorming, sketching ideas, specifying demands, scenario technique, needs- and analyzing of products and other methods useful for product development. Product semantics and design aesthetics. Anthropometrics and biomechanics, cognition and methods useful when developing products. Fundamental knowledge in form, color and basic visualization techniques. Chromatics and principles of colour composition.
Product semantics. Studies, analysis and experiments with form and colour synthesis. Analysis of industrial design products.

Teaching and working methods

Lectures and seminars treat important parts of the course and follows up with laboratory tutorials. Parallel to this a project is running were the different course contents are being used.
The course runs over the entire autumn semester.

Examination

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

Grades are given as ‘Fail’ or ‘Pass’

Grades

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

Other information

Supplementary courses: CAD in the Industrial Design Process

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: 28 h
Recommended self-study hours: 132 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.