Machine Elements

Programme course

6 credits

Maskinelement

TMMI16

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, B 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
Mathematics, mechanics and solid mechanics.

Intended learning outcomes
The course gives a general description of design, function and use of machine elements. After the course, the student:
- Should understand and be able to describe the function of the most common machine elements.
- Should be able to analyze the function of different machine elements used in mechanical designs.
- Should be able to design and dimension machine elements in mechanical systems.
- Should be able to compare and evaluate the suitability of fastening and transmission elements in mechanical systems.
- Should be able to discuss the plausability of the results.

Course content
Fastening elements (bolts, springs, shaft connections) and transmission elements (gears, couplings, brakes, belt drives)

Teaching and working methods

The basic content is given in lectures, and in supervised exercises. In a laboratory exercise, the practical build-up of some elemets is demonstrated.

Examination

LAB2	Laboratory work	1 credits	U, G
LAB1	Laboratory work	1 credits	U, G
TEN2	Written examination	4 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

Peter Christensen

Course website and other links

Education components

Preliminary scheduled hours: 48 h
Recommended self-study hours: 112 h

Course literature

Kompendier

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.