

# Solid Mechanics

Programme course

6 credits

Hållfasthetslära

TMHL22

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

- Energy-Environment-Management
- Mechanical Engineering, M Sc in Engineering
- Industrial Engineering and Management, M Sc in Engineering
- Industrial Engineering and Management - International, 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

Solid Mechanics

## Intended learning outcomes

The course will give fundamental knowledge of useful methods for structure analysis and design applications. The course will also prepare the student for advanced courses in Solid Mechanics.

## Course content

Stability of discrete and continuous systems and Euler buckling. Fatigue analysis. Multi-axial stress states, stress analysis, Hooke's law, yield criteria. Finite element applications.

## Teaching and working methods

Lectures and tutorials are given, laboratories and homework assignments should be carried out by the students.

## Examination

LAB1	Laboratory work and assignments	1 credits	U, G
TEN1	Written examination	5 credits	U, 3, 4, 5

## Grades

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

## Other information

Supplementary courses: Solid Mechanics, advance level:

## Department

Institutionen för ekonomisk och industriell utveckling

## Director of Studies or equivalent

Peter Schmidt

## Examiner

Bo Torstenfelt

## Course website and other links

<http://www.solid.iei.liu.se/Education/>

## Education components

Preliminary scheduled hours: 64 h

Recommended self-study hours: 96 h

## Course literature

Lundh H: Grundläggande hållfasthetslära, KTH, Stockholm, 2000.

## 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://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).