

**SYLLABUS**

# **Mechanics 4.5 credits**

## **B0010T**

**Mekanik**

**Course syllabus admitted: Autumn 2012 Sp 1 - Autumn 2012 Sp 2**

DECISION DATE  
**2012-04-03**

# Mechanics 4.5 credits B0010T

## Mekanik

### First cycle, B0010T

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Fysik	Physics

## Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language +

Swedish upper secondary school courses Physics 2, Chemistry 1, Mathematics 3c (specifik entry A8).

Or:

Swedish upper secondary school courses Physics B, Chemistry A, Mathematics D (specifik entry 8)

## Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

## Examiner

Nils Almqvist

## Course Aim

On completion of the course the student will be able to

- Perform calculations of force, torque and power on bodies in rest and motion.
- Apply fundamental statics and dynamics in order to analyse and solve simple mechanical problems independently.
- Apply the laws of mechanics to solve perturbations in process and production equipment

## Contents

The course consists of statics, kinematics and particle dynamics,

Within statics force, torque and centre of gravity are treated as well as equilibrium with and without friction.

The kinematics part covers linear, rotational and composite movement.

The particle dynamics part covers the equation of force, work and kinetic energy, momentum and impulse, collisions, and inertial forces.

## Realization

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

Lectures and calculation exercises.

## 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. Written exam.

## Remarks

The number of opportunities for the student to obtain approved result is limited to five.

Replaces FY1005, FY1011.

## Literature. Valid from Autumn 2012 Sp 1

Kompendium i Mekanik. tillhandahålles av Bergsskolan i Filipstad. (130 s).

## Course offered by

Department of Engineering Sciences and Mathematics

## Items/credits

No items/credits available

## Syllabus established

by Dept TVM Mats Näsström 2012-04-03