



SG1301 Mechanics, Addition Course 3.0 credits

Mekanik, påbyggnadskurs

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for SG1301 valid from Autumn 2019

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Active participation in mechanics courses containing particle dynamics, e.g. participation in examination (s) and/or seminars.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After completing the course the student should be able to

- read and understand mathematical text applied in the field of mechanics, and communicate reasoning and calculations in this field orally and in writing in such a way that they are easy to follow
- identify a concrete mechanical problem, and choose suitable mechanical models based on a problem description
- translate the mechanical model into a mathematical model
- treat the problem mathematically and critically analyze the significance of the result

in order to use a physical mindset and communicate this within the framework of engineering science contexts.

Course contents

Vector algebra and dimension views. Power and torque. Power systems; power pairs, connection, equimolar power systems. The centre of mass; particle system, rigid bodies, composite bodies. Equilibrium; equilibrium conditions, 2D and 3D, friction.

Course literature

Nicholas Apazidis, Mekanik I : Statik och Partikeldynamik, Studentlitteratur, Lund.

Examination

- INL1 - Assignments, 1.0 credits, grading scale: P, F
- TEN2 - Examination, 2.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

The examiner, in consultation with the KTH coordinator for disability (Funka), decides on any adapted examination for students with documented, permanent disability. The examiner may allow another examination form when re-examining individual students.

Other requirements for final grade

- INL – Assignments, 1,0 credit, grade scale: P/F

- TEN – Written exam, 2,0 credits, grade scale: A-F

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.