SG1113 Mechanics, Continuation Course 6.0 credits

Mekanik, fortsättningskurs

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

Establishment

Course syllabus for SG1113 valid from Autumn 2019

Grading scale

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

Education cycle

First cycle

Main field of study

Mechanical Engineering, Technology

Specific prerequisites

Active participation in SG1112 Mechanics I.

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,
- report derivations of the course's central relationship,
- identify a concrete mechanical problem, and choose suitable mechanical models based on a problem description,
- translate the mechanical model into a mathematical model,
- mathematically treat the problem 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

The laws of mechanics for a system of particles. Rigid body two dimensional kinematics. Moments of inertia and products of inertia. Rigid body two dimensional dynamics. The laws of mechanics in accelerated reference frames.

Course literature

Nicholas Apazidis: Mekanik II, Studentlitteratur, Lund.

Examination

- INL1 - Hand in Task, 1.5 credits, grading scale: P, F
- TENB - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- TENA - Examination, 1.5 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.

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

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

Assignment (INL1; 1.5 credits), the theoretical exam (TENA; 1.5 credits) can be passed through partial tests, problem exam (TENB; 3.0 credits).

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.