

SYLLABUS

Mechanics 7.5 credits

F0003T

Mekanik

Course syllabus admitted: Autumn 2008 Sp 1 - Spring 2011 Sp 4

DECISION

The syllabus was established by the Department of Applied Physics and Mechanical Engineering 2007-02-28, and remains valid from autumn 2007.

Mechanics 7.5 credits F0003T

Mekanik

First cycle, F0003T

| 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 and Elementary vector calculations and integrals equivalent to basic courses in mathematics for Bachelor programs (MAM 187 and MAM 188).

Selection

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

Examiner

Nils Almqvist

Course Aim

To impart basic knowledge of classical mechanics concerning equilibrium of bodies, motion of particles and rigid bodies in two dimensions. The student shall know how to apply the methods of the classical mechanics in the solution of problems

Contents

Statics

Equilibrium conditions in two dimensions (including free-body diagram), trusses, center of mass, dry friction

Dynamics of particles

Kinematics, Newton's second law, work and energy, linear and angular momentum, impact, undamped vibrations

Dynamics of rigid bodies

Kinematics, mass moment of inertia, fix axis rotation, general plane motion, work and energy, linear and angular momentum

Realization

Lessons and compulsory laboratory work

Examination

Written examination. There can be alternative examination methods.

Remarks

This course cannot be part of the degree together with the courses MTF096 (Physics1), MTF098 (Physics3), MTF008 (Mechanics), MTF429 (Mechanics for the Bachelor program)

Overlap

The course F0003T is equal to MTF095

Literature. Valid from Autumn 2007 Sp 1

Grahn-Jansson: Mekanik (Studentlitteratur)

Laboratory instructions etc. (LTU)

Course offered by

Department of Engineering Sciences and Mathematics

Items/credits

| Number | Type | Credits | Grade |
|--------|----------------------|---------|----------------|
| 0002 | Laboration statistic | 0 | U G# |
| 0003 | Laboration dynamics | 0 | U G# |
| 0004 | Written exam 1 | 3.8 | 6 U G VG 3 4 5 |
| 0005 | Written exam 2 | 3.7 | 6 U G VG 3 4 5 |

Last revised

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Syllabus established

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