



ML0015 Physics A 9.0 fup

Fysik A /Basårskurs/

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

Establishment

Course syllabus for ML0015 valid from Autumn 2012

Grading scale

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

Education cycle

Pre-university level

Specific prerequisites

Basic qualifications for university studies and Mathematics B from high school or equivalent

Language of instruction

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

Intended learning outcomes

OVERALL GOALS This course will provide a scientific perspective and an understanding of essential physical relations, and provide a good basis for further studies in physics and technical subjects which are part of higher education and engineering programs. The course includes a number of mandatory laboratory exercises.

Course objectives for Physics Course A

After successfully taking this course, students will be able to:

- Explain the physics working methods, main physics issues, values and basic mathematical models used in calculating of physics problemsolving by using concept, issues and models
- Explain about light, reflection, diffraction and some fields of applications in optics
- Make basic declaration on power and moment and allso be able to use these issues to describe equibalance between them
- Explain the linjar movement and solve problems with movement by using formulas and diagrams of density, preasure, energy and temperatur
- Explain energi, electric charge, voltage and currency, resistant, electric field, electric energi, power and degree of efficiency
- Plan and realise experiments to investigate different physicals phenomena or to test a model
- Describe and interpret the result af experinments both verbal and written

Course contents

Physics course A, 7.5 credits:

Working methods, density, optics, forces, energy and power, electric charges, voltage and current, thermodynamics, scheduled motion, moment of force, pressure, Archimedes' principle, and force and motion.

Laboratory, 1.5 credits: Includes Physics Course A

Disposition

Lectures

Laboratory Exercices

Course literature

HeurekaA!, ISBN 978-91-27-56721-4

HeurekaA!, övningar och problem, ISBN 978-91-27-56723-8

Formler och tabeller ISBN 978-91-27-72279-8

Examination

- TEN1 - Examination, 7.5 fup, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 1.5 fup, grading scale: P, 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.

In addition, certified statements, orally and/or in writing of selected tasks during the course

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.