



ML0025 Physics for Technical Preparatory Year II 18.0 credits

Fysik för basår II

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 ML0025 valid from Spring 2017

Grading scale

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

Education cycle

Pre-university level

Specific prerequisites

The upper-secondary school from 1 July 2011 and adult education at upper-secondary level from 1 July 2012:

- Mathematics 3, Physics 1b1 (or Physics 1a) and Chemistry 1.

Language of instruction

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

Intended learning outcomes

On completion of the course, the student should be able to:

- carry out, describe, analyse and present experiments to examine physical phenomena which are discussed in the course.
- apply the working methods of physics, physics concepts and units, and basic physics models.
- identify, analyse and solve physics problems and present them in a structured way.

Course contents

Module A

- Projectile motion
- Circular motion
- Electric fields
- Potential
- The capacitor
- Magnetic fields
- Induction
- Alternating current

Module B

- Mechanical waves
- Electromagnetic waves
- Reflection
- Refraction and interference
- Oscillatory motion
- Photoelectric effect
- Atoms and quantum mechanics
- The atomic nucleus and radioactivity
- Relativistic effects

Examination

- LAB1 - Laboratory Work, 2.0 credits, grading scale: P, F
- TENA - Written examination, 8.0 credits, grading scale: A, B, C, D, E, FX, F
- TENB - Written examination, 8.0 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.

Other requirements for final grade

Final grades are given if all examination parts are approved. The final grade is based on the points in the examination.

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.