



# TB0022 Physics for Technical Preparatory Year, online with meetings on campus I 9.0 fup

Fysik för basår, distans med campusträffar I

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

## Establishment

The official course syllabus is valid from the spring semester 2022 according to a decision by the Vice President for Education: V-2022-0012. Decision date: 18/01/2022

## Grading scale

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

## Education cycle

Pre-university level

## Specific prerequisites

## Language of instruction

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

## Intended learning outcomes

## General goals

The course should promote a natural science perspective and give an understanding of basic physics concepts and relationships and give a good basis for further studies within physics and technical subjects that are included in the 3- and 5-year engineering programmes.

After passing 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 basic physics models and concepts to identify, analyse and solve physics problems within the scope of the course content and report the solutions in a structured way.

## Course contents

- Working methods, density, forces and equilibrium, torque, pressure, Archimedes' principle, energy, mechanical work, power, general gas equation, thermodynamics, electric charge, electric energy, voltage, current, linear motion, force and motion, momentum and impulse
- Laboratory exercises

## Examination

- LAB1 - Laboratory work, 1.5 fup, grading scale: P, F
- TENA - Written exam, 7.5 fup, 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.

## Other requirements for final grade

During the course, approved oral and/or written presentations of selected assignments may be required

For final grade, it is required that all examination items are passed.

## 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.