



LTH

FACULTY OF
ENGINEERING

Course syllabus

Tekniskt basår: Fysik 1-2, del b Pre-University Course in Technical Sciences: Physics 1-2, part b

TBAA20, 7 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED TB

Date of Decision: 2023-04-19

General Information

Compulsory for: TNB1-TEBA

Language of instruction: The course will be given in Swedish

Aim

The purpose of the three courses Physics 1-2 (Part a, Part b and Part c) is to complement an upper secondary school education in Physics 1 and Physics 2.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

Does not exist in this form.

Competences and skills

For a passing grade the student must

Does not exist in this form.

Judgement and approach

For a passing grade the student must

Does not exist in this form.

Contents

Electricity and magnetism: Electric and magnetic fields and their effects on charged particles.

Electric circuits with AC and DC. Resistors and capacitors. Energy and power. Induction.

Wave motion: The motion of mechanical and electromagnetic waves. Ray optics – reflection and refraction of light. Mirrors and lenses. Microscope and telescope. Polarization.

Examination details

Grading scale: UG - (U,G) - (Fail, Pass)

Assessment: Written exam and passed laboratory works.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0120. **Name:** Written Examination.

Credits: 6. **Grading scale:** UG. **Assessment:** Written examination.

Code: 0220. **Name:** Laboratory Works.

Credits: 1. **Grading scale:** UG. **Assessment:** Passed laboratory works.

Admission

The number of participants is limited to: No

Reading list

- Cutnell, John D, Johnson, Kenneth W, Young, David & Stadler, Shane:
Physics, 11th Edition, EMEA Edition. John Wiley & Sons Inc, 2019, ISBN:
9781119585299.

Contact and other information

Course coordinator: Adam Kristensson, adam.kristensson@nuclear.lu.se

Course homepage: <http://www.lth.se/utbildning/tekniskt-basar/>

Further information: The contents of the courses Physics 1-2, Part a and Physics, Part b correspond to the upper secondary school education in Physics 1. The contents of the courses Physics 1-2, Part b and Physics, Part c correspond to the upper secondary school education in Physics 2. The scope for this course is expressed in access education credits (fup).