

Applied Physics I

86-385-04

Lecturer: Dr. Noa Koartzweil

Course type: Lecture + Practice

Date: 2019-2020

semester: A

weekly hours: 3L + 2P

Aim of the course:

The Applied Lab is designed for third year students in physics. The laboratory is mainly concerned with solid state and experimental methods.

Details of subjects to be covered:

Work in the laboratory is carried out by independent experiments according to laboratory briefings, according to the list below. Work is done in pairs.

The experiments are rotated so that each pair will perform three experiments during the semester.

- Hall effect in semiconductors
- Vacuum technique
- Noise in electronic systems
- Microwave waves
- Ultrasound
- Superconductivity
- Gamma radiation

Prerequisites:

1. Computerized Physics Lab (86-232)
2. Required courses of 1st and 2nd year.

Course mandatories:

Each month each pair of students will conduct an experiment. The first week will be dedicated to a comprehensive study of the theoretical material of the experiment and the structure of the system.

The actual experiment takes place over two consecutive weeks, and in the last week the measurements should be summarized in writing a report and an examination.

Grading:

For each of the three experiments during the semester, the grade distribution is:

30% laboratory work, 30% report, 40% examination.

Bibliography:

Laboratory briefings and additional reading materials are available at the wiki labs:
physicslabs.biu.ac.il