# INTRODUCTION

### 1. Conditions for access to classes in the laboratory:

- become familiar with the principles of safety in laboratory.
- become familiar with details of the instruction of the exercise
- come on time to class
- each team should have an instructions to exercise and measurement protocol, which can be found at: <a href="http://www.ue.eti.pg.gda.pl/~bpa/ec/">http://www.ue.eti.pg.gda.pl/~bpa/ec/</a>

### 2. Measurements

Students switch on measurement equipment according to the instructions (read carefully before class). Apart from exceptional cases, which are marked by the teacher, students do not make any changes to the configuration of measuring systems.

Student should use of measurement instruments reasonably and carefully. Do not make any unnecessary changes of parameters and modes of measuring instruments. The results of the measurements should be written in the measurement protocol (one protocol per team). The protocol documents the work of students in the laboratory. Please fill in the table in the head protocol: names of students, date of exercise, number of dean's group. Data included in the protocol must be unambiguous, is not allowed to write in pencil. The protocol must be accepted by the teacher. The protocol without teacher's signature is not valid.

#### 3. Measurement report

The report should contain the following elements:

- measurement protocol supplemented with the results of calculations,
- elaboration of specific tasks defined in the protocol and instruction (calculations and graphs)
- conclusions and comments.

The theory from an instruction, lectures or books should not be prescribed to the report. The calculations should be carried out in accordance with formulas given in the protocol or instructions. It is important to comment similarities and differences between the measurements and the results of theoretical calculations. Graphs must be clearly labeled. Pay attention to the correct description of the quantities and units on the graph axes. The scale of the graph axes should be selected according to the range of measured values. Graph should be properly titled, according to its content.

The reports are rated on a scale of 0-10 points.

The report prepared at home, (one report per team), must be delivered to the teacher on the next class (or next week). The assessment of reports will be given on the following classes. Any comments regarding the assessment should be reported to the teacher.

## 4. Principles of safety

- in the laboratory do not eat, drink or use mobile phones
- do not operate the measuring equipment with wet hands
- do not connect to power any devices or measurement systems
- changes in the configuration of measurement systems, with few exceptions, make teachers
- any defects in the operation of the devices must be immediately reported to the teacher
- the measuring range of equipment should be adjusted to a range of measured values
- Do not make any changes to the configuration of measuring systems