

# Safety Regulations for the Power Electronics Laboratory Room

(bldg. B18, room 8 “lab PPM”)

*Translation without official value—in case of doubt, the original Polish version prevails.*

1. Only students participating in scheduled classes and persons authorised according to separate regulations are **allowed to stay and work** in the laboratory room.
2. It is forbidden to stay in the laboratory room under the influence of **alcohol, narcotic drugs or stimulants**.
3. At the **laboratory stands**—including under the tables and by the tables—it is forbidden to:
  - (a) put any objects other than laboratory equipment, computers and notepads;
  - (b) consume food;
  - (c) store outer garment, umbrellas, bags etc.
4. It is forbidden to lay down cables or place any objects in **walking accessible space**.
5. **Before using** any device or laboratory unit one must get acquainted with its operation manual, paying particular attention to advices and warnings related to equipment and user safety.
6. Laboratory devices and units should be used for **purposes they are intended for**, in the way **described in their operation manuals** and only **within the scope of the work** being carried out. The equipment should be operated in a careful, delicate and thoughtful manner, bearing in mind its high value.
7. Equipment used and investigated circuits intended to be supplied from the mains should be connected **using the protective earth (PE)**. Using sockets—including extension cords—lacking a PE connector is prohibited. Exceptions from this rule are admissible if:
  - (a) it is explicitly permitted in the operation or exercise manual,
  - (b) the unit has a factory-made two-connector (L and N) plug,
  - (c) the unit is supplied through an isolating transformer,
  - (d) connecting the protective earth makes carrying out a given experiment impossible as a rule, which has been stated by the supervisor of the work.
8. Students can use the **three-phase mains** only upon explicit consent of their teacher or supervisor.
9. Working with circuits supplied with a voltage higher than the extra-low voltage<sup>1</sup> is only allowed **in presence of another person** and requires special caution.
10. Changes and switch-overs in circuits supplied with a voltage higher than the extra-low voltage<sup>1</sup> or including high-current or inductive loops<sup>2</sup> can only be made after **disconnecting or switching off the power source**.
11. One should not **touch metal surfaces and elements** of supplied circuits because of the risk of shock or scald. Safety-grounded housings in justified cases are an exception.
12. During works involving formation of noxious fumes, appropriate room **ventilation** must be assured. For reasons of hygiene, the room should be aired after each class by reopening both windows and opening the door at the same time.
13. Works involving any risk of objects getting into the eye (burst, tear, splash etc.) must be carried out using **safety glasses**.
14. **Before starting the experimental part** of an exercise, one must get acquainted with measurement set-up description and safety guidelines included in the exercise manual and other manuals available at the laboratory stand.
15. Exercises should be carried on strictly **according to guidelines contained in the exercise manual**, strictly observing safety guidelines given in bold type.
16. In circuits under investigation, the **power supply can only be turned on** after obtaining teacher’s explicit consent and after the measurement set-up is checked by the teacher. This also applies to re-supplying the circuit after changes are made to the measurement set-up.
17. In case **anomalies in device operation** or device malfunction are observed, the device should be promptly turned off and a competent employee or PhD student should be notified.
18. Only teachers and technical staff are authorised to **assembly, disassembly or repair** educational set-ups and laboratory equipment.

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Laboratory Supervisor  
Łukasz Starzak

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<sup>1</sup> According to the Central Institute for Work Protection (Centralny Instytut Ochrony Pracy) guidelines, the extra-low voltage is 50 V for AC circuits and 100 V for DC circuits.

<sup>2</sup> The high current threshold is considered to be 1 A in circuits supplied with a voltage not higher than the extra-low voltage and 100 mA in other circuits.