

**NATIONAL UNIVERSITY OF ENGINEERING
COLLEGE OF MECHANICAL ENGINEERING**



**LABORATORY OF ELECTRICITY
LABORATORY OF AUTOMATION**

**Mechanical Engineering Program
Mechanical-Electrical Engineering Program
Mechatronics Engineering Program
Naval Engineering Program**

GENERAL SAFETY GUIDELINES

Lima, Peru

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Laboratory of Electricity Laboratory of Automation General Safety Guidelines

The safety of students, faculty and staff is the top priority regarding the operation and use of machines, equipment and tools at the laboratories of the College of Mechanical Engineering at National University of Engineering UNI.

All students, faculty and staff must comply and enforce the following general safety guidelines applicable to the Laboratory of Electricity.

- Be sure your hands, clothes and personal belonging are completely dry when entering the laboratory rooms.
- Put personal belongings (jackets, backpacks, briefcases, etc.) in designated places far from working tables.
- Turn off the power supply connected to the equipment before inspection.
- Use only tools and equipment with non-conductive grip, when working with electrical devices.
- All current transmitting parts of any electrical devices must be enclosed.
- When checking an operating circuit, keep one hand either in a pocket or behind your back to avoid making a closed circuit through the body.
- Maintain the works place free from unnecessary/unrelated objects such as mobiles, books, papers, and clothes.
- Never change wiring with circuit plugged into the power source.
- Never plug leads into power source unless they are connected to an established circuit.
- Check circuits for proper grounding with respect to the power source.
- All devices should be equipped with schuko-plug. Consult with laboratory supervisor or staff if an exception should be given.
- Do not insert another fuse of larger capacity if an instrument keeps blowing fuses - this is a symptom requiring repairs. If a fuse blows, find the cause of the problem before putting in another one.
- Do not use or store highly flammable solvents near electrical equipment.
- Keep access to electrical panels and disconnect switches clear and unobstructed.
- Three phase electricity should not be experimented by students unless with approval of laboratory supervisor or staff.
- Table assigned facilities are strictly assigned to each specific table, do not move any facilities before permission from laboratory supervisor or staff.
- Pay attention to the location of emergency stops and other switches of the experimental setup, as well as location of safety devices, escape routes, and fire extinguisher.

Electrical Machines Laboratory

- Inspect power cords to be sure they are not frayed or have exposed wiring.
- Do not allow cords to dangle from counters or tables hoods, nor contact hot surfaces to prevent melting insulation.
- Extension cords are not allowed in the laboratory for permanent use.
- Portable power supplies must be used carefully. Never attach an exposed connector such as an alligator clip to a power supply.
- Keep prudent distance from electrical machines.
- Be sure rotating electrical machines have their base firmly fixed to ground.
- Be sure there is not any object close to the moving (rotating) parts of electrical machines.
- Pay attention to the location of emergency stops and electric breakers
- Experimental work must be carried out under the supervision of a specialist faculty or laboratory staff.

Robots Laboratory

- It is not allowed to touch, use, or move setups and equipment without prior permission of the laboratory staff.
- Students and faculty must not operate equipment without thorough safety and operating instructions from the laboratory staff.
- No experiments, with robots in the laboratory, should be performed without the laboratory staff approving it.
- Flying indoor with drones is strictly forbidden!
- Turn off the power supply to the equipment before an inspection is performed.