

ESTONIAN MARITIME ACADEMY'S ELECTRICAL INSTALLATION LAB (MA2-023) RULES FOR INTERNAL ORDER AND OCCUPATIONAL SAFETY

- [Estonian Maritime Academy](#)

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Managed by: the lecturer responsible for the laboratories and workshops of the Centre of Maritime Education and Training of the Estonian Maritime Academy

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- [Form V5-1/0 Internal Work Procedure and Occupational Safety Rules Review Sheet](#)

1. General safety requirements

1.1. All individuals must undergo occupational safety instruction before commencing work in the Electrical Installation Lab. A person who has completed occupational safety instruction confirms, by signature, that he/she has read the regulations and the requirements set out in it and undertakes to comply with them. ([Form V5-1/0](#)).

1.2. Occupational safety instruction shall be conducted in accordance with the Internal Work Procedure and Occupational Safety Rules of the Electrical Installation Lab, the requirements of which must be adhered to by all the persons in the laboratory.

1.3. During the occupational safety instruction, the persons commencing work in the laboratory will be informed about the Internal Work Procedure and Occupational Safety Rules, the risk factors in the work environment and the use of personal protective equipment, ergonomically correct working positions and techniques, laboratory work procedures, fire and electrical safety requirements, the locations of first aid equipment and fire extinguishing equipment, the safety signs used at the workplace and the locations

of the emergency exits and routes.

1.4. Occupational safety instruction is conducted by a supervisor/lecturer.

1.5. The lecturer responsible for the laboratories and workshops of the Shipping Centre is responsible for the maintenance of the equipment of the Electrical Installation Lab.

1.6. An access card is required to enter the lab; students are allowed to enter only with the permission of the supervisor/lecturer.

1.7. Users of the lab are required to promptly inform the supervisor/lecturer and other lab users of any detected deficiencies or equipment malfunctions. Working with malfunctioning equipment is prohibited; in the event of a hazardous situation, work must be halted immediately.

1.8. Users of the lab are not permitted to operate independently any equipment without prior safety instruction and approval to commence work granted by the supervisor/lecturer . If you have any doubts or questions, please contact the supervisor/ lecturer.

1.9. If you notice another lab user engaging in improper or prohibited behaviour, you should inform him/her thereof and, if necessary, also notify the supervisor/lecturer thereof .

1.10. It must be safe to work in the lab, it is recommended that you move around in the lab only when necessary and without haste, so as not to disturb others. Move with caution to avoid slipping or falling, as well as to prevent injuries and damage to lab equipment. Engaging in activities that interfere with studies in the lab is prohibited.

1.11. The working environment must be organised to ensure safe and ergonomic working conditions. Remove unnecessary and disturbing objects from the work area.

1.12. In the event of failure to comply with the requirements set out in the Internal Work Procedure and Occupational Safety Rules, the laboratory user shall be immediately removed from the work being performed. In the event of repeated non-compliance, the lab user shall be removed from all works.

1.13. Any material damage to the university resulting from the intentional violation or negligence in the fulfilment of the requirements set out in the Internal Work Procedure and Occupational Safety Rules shall be compensated in full by the

person who caused the damage.

1.14. The supervisor of the work/lecturer shall be informed immediately of any accident/injury or fire occurring during laboratory work. Appropriate measures must be taken depending on the accident.

1.15. In case of an accident involving a victim, the victim shall be removed from the danger zone, and if necessary, first aid providers or an ambulance (phone number 112) must be called, and it must be ensured that first aid is provided to the victim.

1.16. In the event of a serious accident, the inviolability of the workplace and equipment shall be ensured until the arrival of the chief working environment specialist, the representative of the Labour Inspectorate or the police, and until obtaining permission from them to resume work.

1.17. If it is not possible to ensure inviolability of the workplace and equipment, their condition at the time of the accident must be recorded.

1.18. In case of a serious and imminent risk of an accident, actions shall be taken by applying one's knowledge and available technical means to prevent potential consequences, even if it is not possible to immediately contact the supervisor/lecturer.

1.19. In case of a serious or unavoidable risk of an accident, the persons working in the laboratory must leave the workplace quickly and safely; a person who leaves without permission must not be punished or placed at any disadvantage.

1.20. In case of fire, safety of people and their quick evacuation or rescue from the danger zone must be ensured.

1.20.1. A person who discovers fire is obliged to immediately call the emergency number 112 and provide the following information to the rescue centre:

1.20.1.1. the exact address where the fire is located, details on what is burning, and the person reporting the fire;

1.20.1.2. answers to the questions asked by the rescue official;

1.20.1.3. the person must not end the call until permission to do so is granted.

1.21. As far as possible, begin extinguishing the fire using basic fire extinguishing equipment and close the doors and windows to prevent the spread of fire.

1.22. When the rescue team arrives at the scene, the person who discovered the fire or the representative of the possessor of the site shall inform the head of the rescue team of the following:

1.22.1. the source and extent of the fire;

1.22.2. the potential hazard to people;

1.22.3. other potential hazards arising from the fire (explosions, hazardous chemicals, electrical equipment, etc.).

2. Before commencing work

2.1. Students may work at a workstation only in the presence of a supervisor/lecturer.

2.2. It is prohibited to take any used lab equipment out of the lab premises.

2.3. Storing unnecessary objects, storing and consuming food and beverages in the lab is prohibited.

2.4. Prior to commencing any laboratory work, read the data sheets of laboratory equipment and components, paying particular attention to all safety requirements.

2.5. Prior to commencing any laboratory work, the lab user must read the instructions for the task to be performed and any additional safety requirements relevant to the work being undertaken.

2.6. Select the circuit components required to perform the task.

2.7. Prepare the workplace and ask for the necessary tools and measuring instruments from the supervisor.

3. During work

3.1. Only the work specified in the instructions is permitted; unauthorised experiments are prohibited.

3.2. The electrical circuits must be built and circuit diagrams must be created in accordance with the requirements laid down in the work instructions or the instructions provided by the supervisor/lecturer.

3.3. The lab's power supply shall be switched on and off by the supervisor/ of the work/lecturer.

3.4. In case of power switches, a circuit created by a student in the course of laboratory work can be energized only after it has been inspected by the work supervisor/lecturer.

3.5. When utilizing tools (such as soldering irons, screwdrivers, etc.), the occupational safety requirements for the use of the corresponding tools must be adhered to.

3.6. Connections for voltages above 42 V shall be made or altered **only when the circuit is de-energised**.

3.7. When using a current transformer, it is imperative to adhere to the prescribed guidelines for its proper operation. Connections must be made when the circuit is de-energized. Secondary winding should be loaded with a sufficiently low resistance as specified in the test requirements.

3.8. It is prohibited to disassemble a device while it is energized.

3.9. The circuits must be built in a way that safety and overview of the work is ensured (use wires of appropriate colour and position the devices logically).

4. After completing work

4.1. The work must be submitted to the supervisor/lecturer for assessment.

4.2. Put the used equipment, components and tools to their designated places.

4.3. The workplace must be cleaned and organised.

5. Electrical safety

5.1. Electrical wires can only be connected when the power supply has been switched off.

5.2. Use only low voltage DC up to 24 V.

5.3. Before using an electrical device, make sure that the sockets, cables and plugs of the electrical devices are undamaged and that the device is suitable for the electrical supply with which it is going to be used.

5.4. Do not touch grounded metal objects with the other hand when turning an electrical device on or off.

5.5. If you detect a burning smell, see sparks, or notice unexpected heating of a device or any of its parts when using an electrical device, stop the work immediately, disconnect the device from the mains and inform the supervisor of the laboratory work.

5.6. A burning electrical device must be disconnected from the power supply at the electrical panel without touching the device.

5.7. Burning electrical equipment must not be extinguished with water. Use a dry powder or CO₂ fire extinguisher to extinguish the fire.