**I-REVISION AND APPROVAL**

This procedure is released, checked and approved as follows.

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| Prepared by | Reviewed by | Approved by |
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**II-Revision History**

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| **#** | **Date of Revision** | **Ver.** | **Validity** | **Description of Change** | **Prepared by** | **Reviewed by** | **Approved by** |
| 1 | 16/02/2016 | 0 | 3 years | Original Release | Mechatronics Department Staff | Rasha Alkabbanie | Dr. Mehmet Ozdemir |
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1. **Safety Rules:**

* The existence of extinguishers in the lab.
* Facial protection shields should be provided.
* Standardized laboratory safety glasses should be worn.
* Special gloves must be worn.

1. **General Rules**

* Smoking, including electronic cigarettes, is prohibited in all laboratories.
* Shoes shall be worn that provide full coverage of the feet, and appropriate personal clothing shall be worn in laboratories.
* No food or drinks are allowed in the lab.
* **The instructor must be in the laboratory while student working.**
* **Remove all loose conductive jewelry and trinkets, including rings, which may come in contact with exposed circuits. (Do not wear long loose ties, scarves, or other loose clothing around machines.).**
* Be familiar with the locations and operation of safety and emergency equipment such as emergency power off in your lab.
* **When making measurements, form the habit of using only one hand at a time. No part of a live circuit should be touched by the bare hand.**
* **Keep the body, or any part of it, out of the circuit. Where interconnecting wires and cables are involved, they should be arranged so people will not trip over them.**
* **Be as neat as possible. Keep the work area and workbench clear of items not used in the experiment.**
* Remove metal bracelets or watchstraps.
* **Report any damages to equipment, hazards, and potential hazards to the laboratory instructor.**

1. **Rules & Regulations on Lab & Equipments Use**

* Do not displace or remove laboratory equipment without instructor or technician authorization.
* Never open or remove cover of equipment in the laboratories without instructor authorization.
* Report all problems to the instructor or lab technician.
* **Always check to see that the power switch is OFF before plugging into the outlet. Also, turn instrument or equipment OFF before unplugging from the outlet.**
* No power laboratory should be performed without laboratory instructor present.
* Before equipment is made on, circuit connections and layout should be checked by the instructor.
* Never make any changes to circuits without first isolating the circuit by switching off and removing connections to supplies.
* **No ungrounded electrical or electronic apparatus is to be used in the laboratory unless it is double insulated or battery operated.**
* Voltages above 50 V rms AC and 50 V DC are always dangerous. Extra precautions should be considered as voltage levels are increased.
* **Consider all circuits to be "hot" unless proven otherwise.**
* **When unplugging a power cord, pull on the plug, not on the cable.**
* **When disassembling a circuit, first remove the source of power.**
* Use extension cords only when necessary and only on a temporary basis.
* Do not use damaged cords, cords that become hot, or cords with exposed wiring. Inform the instructor about damaged cords.
* Know the correct handling procedures for batteries, cells, capacitors, inductors, resistors and other high energy-storage devices.
* Inform your instructor if experiments are left unattended. Such experiments should be isolated from the supplies.
* If for a special reason, it must be left on, a barrier and a warning notice are required.
* Equipment found to be faulty in any way should be reported immediately and not used until it is inspected and declared safe.
* Report accidents as soon as possible to the department chair, department secretary.

**Soldering Instructions**

* **Caution:** A soldering iron can heat to around 400°C, which can burn you or start a fire, so use it carefully.
* Unplug the iron when it is not in use.
* Keep the power cord away from spots where it can be tripped over.
* Take great care to avoid touching the tip of the soldering iron on a power line. If a power cord is touched by a hot iron, there is a serious risk of burns and electric shock.
* Always return the soldering iron to its stand when it is not in use.
* Never put the soldering iron down on your work bench, even for a moment!
* Work in a well-ventilated area.
* The smoke that will form as you melt solder is mostly from the flux and can be quite irritating. Avoid breathing it by keeping your head to the side of, not above, your work.
* Solder contains lead, which is a poisonous metal. Wash your hands after using solder.
* Wear eye protection. Solder can “spit”.
* Keep cleaning solvents in dispensing bottles.