Power Electronics Laboratory

(Location: Electrical Engineering Department, ground floor)

1- Lab Photos

Photo 1

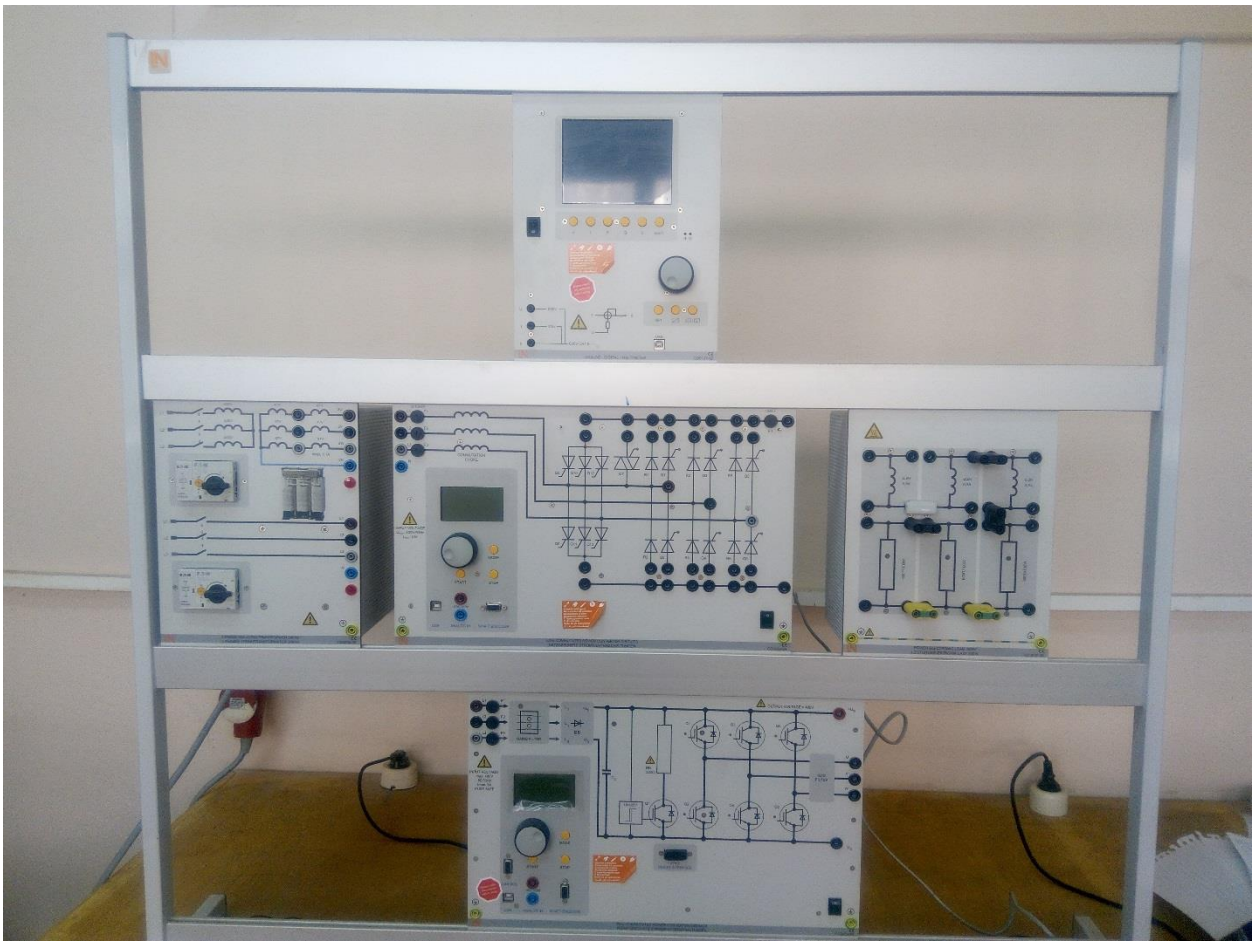
Photo 2

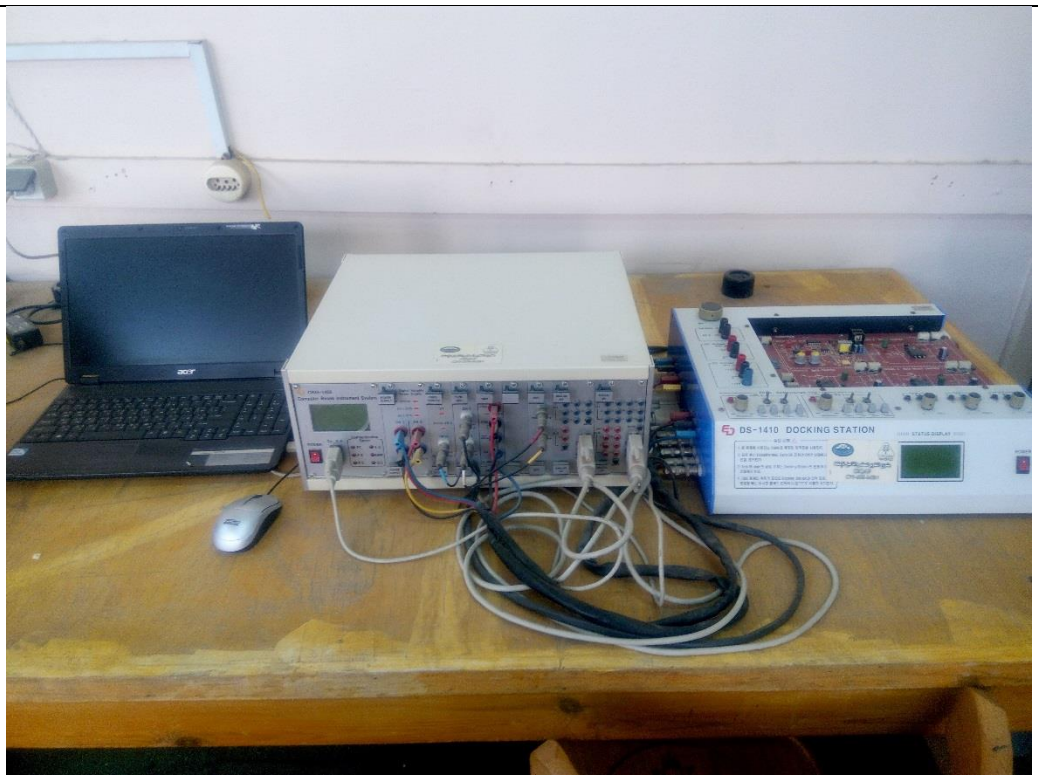
2- Lab Description

The Power Electronics lab is used to teach the practical part of the courses of Electrical Testing (1) that are related to the power electronics for students of the third levels of the Electrical Power Engineering and Machines Program. It is also used in teaching the laboratory part of Electrical Power Engineering courses for students of the other programs.

3- Lab Equipment

The following is a table of equipment and devices that are used in the experiments.





- Module 2 for laboratory experiments

- Oscilliscope

4- Lab Experiments

First year:

Course: None **Code: None**

Second year:

Course: None **Code: None**

Third year:

Course: Electrical Testing (1) **Code: ELE305**

1- **Exp-1: Examine the characteristics of unijunction transistor trigger circuit.**
2- **Exp-2: Full wave phase control of an AC load.**
3- **Exp-3: Full wave phase control of a DC load.**
4- **Exp-4: Chopper circuit: Learning of the poster chopper that increases a low input voltage to high output voltage.**
5- **Exp-5: Square-wave inverter for converting dc power into ac power.**
6- **Exp-6: PMW wave inverter.**
7- **Exp-7: AC phase control: 1- Single-phase ac power controller by SCR. 2- Single phase cyclo converter by SCR.**

Fourth year:

Course: None **Code: None**

5- Lab Maintenance

The laboratory is evaluated to determine the experiments and their readiness to participate in the teaching process and to determine the required maintenance periodically, and the capabilities and problems of the laboratory are periodically reported after each experiment.