

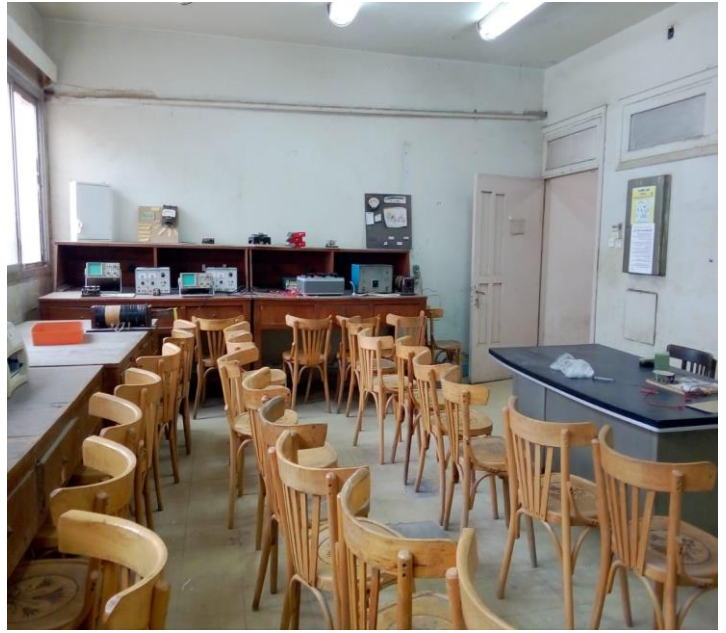
# Electrical Measurements Laboratory

(Location: Electrical Engineering Department, ground floor)

## ***1- Lab Photos***



**Photo 1**



**Photo 2**

## ***2- Lab Description***

The electrical Measurements lab is used to teach the practical part of the courses of Measurements and Measuring instruments for students of the second level of the Electrical Power Engineering and Machines Program. It is also used in teaching the laboratory part of electrical machines 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.



**Variable voltage supply with 7 levels**  
**Output : AC voltage & DC voltage**



**Function generator**  
**Model : FG 600**  
**Frequency 0.01Hz- 100kHz**



**Variable phase Low Frequency Signal Generator**  
**Model : VPG 608**  
**Frequency range : 0.01Hz - 1Khz**



**Wheatstone bridge**  
**Input : DC supply**  
**Model : YW-1**



**High voltage supply**  
**Model :1030A**



**Oscilloscope**  
**Model : HM303**



**Wattmeter  
(0.05:10) A & (5:1000) V  
Model : EW604**

## ***4- Lab Experiments***

### ***First year:***

**Course:** .....

**Code:** .....

### ***Second year:***

**Course:** Measurements & Measuring instruments

**Code:** ELE212

- 1- Exp-1: Calibration of wattmeter using: 1- Three ammeters. 2- Three voltmeters.
- 2- Exp-2: Basic voltmeter design and multimeters.
- 3- Exp-3: AC voltmeter and its frequency response.
- 4- Exp-4: Measuring of unknown resistance by using Wheatston bridge.
- 5- Exp-5: The Maxwell bridge.
- 6- Exp-6: Oscilloscope operation and its basic measurements.
- 7- Exp-7: Measuring frequency and phase shift with the oscilloscope.

### ***Third year:***

**Course:** .....

**Code:** .....

### ***Fourth year:***

**Course:** .....

**Code:** .....

## ***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.