
Program	Engineering
Specialization	Electrical Installations and Equipment
Course Number	020303232
Course Title	Electrical Power Measurements Lab
Credit Hours	1
Theoretical Hours	0
Practical Hours	3

□ **Brief Course Description:**

Experiments have to cover: measurements errors, measurements in DC & AC circuits, load effects, using electronic and digital instruments, active and reactive power measurements, power factor measurement and energy measurement.

□ **Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Measure various electrical quantities (current, voltage, frequency, power and energy).
2. Use DC and AC measuring bridges.
3. Use Oscilloscope in measuring electrical quantities.
4. Use Digital Measuring Devices.

Detailed Course Description:

Lab Number	Unit Name	Unit Content	Time Needed
1.		Study of principle of operation of various types of electromechanical measuring instruments.	
2.		Current and voltage measurements in DC and AC circuits	
3		Current and voltage measurements in AC circuits using current and voltage transformers	
4		Resistance measurements using Wheatstone bridge	
5		Inductance and capacitance using AC bridges	
6		Active and reactive power measurements in single phase circuits	
7		Power factor measurement for resistive, inductive and capacitive loads	
8		Active and reactive power measurements in three phase circuits	
9		Energy measurements in single and measurements in three phase circuits three phase circuits	
10		Oscilloscope	
11		Earthing resistance measurement	
12		Experiment of timers & contactors	

 Evaluation Strategies:

		Percentage	Date
1. Exams	Reports	30	
	Midterm Exam	20%	
	Final Exam	50%	

 Teaching Methodology:

1. Laboratory

 Textbook:

1. Manuals of each type of instruments.

Al-Balqa' Applied University



جامعة البلقاء التطبيقية

تأسست عام ١٩٩٧

2. Manuals of current & voltage transformers.