

**Course Title: Power and Control Laboratory Work**

**Course Code: PCEG 405**

**Credit Hours: 1**

**Course Description:**

This course intends to reinforce the concepts learned in Industrial Electrification and Switchgear & Protection theory classes that have a strong practical applications emphasis, by a series of relevant experiments carried out in the laboratory.

**Course Contents:**

A series of experiments to reinforce the subject matter taught in the course EPEG 416: Industrial Electrification and Control and EPEG 415: Switchgear & Protection. The exact courses covered by laboratory work may vary. The laboratory work can be the followings for the two courses:

1. To study the ac, dc, and impulse voltage testing of different insulating materials
2. To determine the resistance of an earth electrode installed
3. To study the performance characteristics of over-current relay
4. To demonstrate the installation and testing of residual current circuit breaker
5. To demonstrate the installation of contactor, and over-current relay
6. To demonstrate the DOL , Star-Delta and Automatic Star-Delta starting of Induction motor
7. PLC wiring and design for industrial control
8. Two substation visits
9. Other as per availability of equipments in the laboratory

**Evaluation:**

In-Semester Evaluation: 80%

End-Semester Evaluation: 20%