

**Course Title: Advanced Machinery Laboratory Work**

**Course Code: EPEG 307**

**Credit Hours: 1**

**Course Description:**

The course intends to reinforce the concepts learned in advanced electrical machine 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 involving design and analysis of electric machines to reinforce the subject matter taught in 'EPEG 302: Advanced Electrical Machinery'. The experiments to be performed would be as followings:

1. Determination of per phase equivalent circuit parameters of a three phase transformer.
2. To determine equivalent circuit parameters of Three Phase Induction Motor
3. To study the methods of speed control of Three Phase Induction Motor.
4. To determine equivalent circuit parameters of Three Phase Alternator.
5. To determine the equivalent circuit parameters of single phase induction motor
6. To study the voltage build up and voltage and frequency variation in self excited induction generator
7. To study the method of synchronization for parallel operation of Synchronous Generator
8. To verify the phase displacement in Vector Groups of Three phase transformer

**Evaluation:**

In-Semester Evaluation: 80%

End-Semester Evaluation: 20%