DEPARTMENT OF ELECTRICAL ENGINEERING
INDUSTRIAL POWER LABORATORY-4

DISTRIBUTED ENERGY RESEARCH LAB

List of Compulsory Experiments:

1. STATCOM and FACTS based Experiments (EE6491-M.Tech Industrial Power and Automation, EE6291-M. Tech Power System)

   a) Reactive Power Compensation using solar and wind based STATCOM.

   b) Power Factor Compensation and Voltage Regulation using three phase FACTS controller.

2. Experiments On LabVIEW And MATLAB (EE6491-M.Tech Industrial Power and Automation, EE6191-M.Tech Instrumentation and Control System)

   a) State Space Modeling of DC motor in MATLAB and LabVIEW.

   b) PID, fuzzy and fuzzy-PID controller based speed control of dc motor in MATLAB.

   c) PID Controller based speed control of DC motor in LabVIEW.

List of Desirable Experiments:

1. Measuring Voltage and Current of the Microgrid using NI-myDAQ.

2. Solar, Wind based Load Voltage Regulation using cRIO.

3. Modeling and Simulation of FACT devices.

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