

ECE 462: Power Systems Lab Syllabus

The syllabus for ECE 462 could be found at:

<https://sciamble.com/Resources/pe-drives-lab/basic-drives>

It comprises of 8 lab experiments which are as follows:

1. **Introduction:** An introduction to the basic components of an electric drive system and general idea of the speed-control of a DC motor.
2. **Switched-mode DC-DC converter:** Modeling of a SM DC-DC electronic converter in Workbench simulation software.
3. **Characterization of DC motor:** Determining the parameters of a DC motor and modeling it in Workbench simulation software.
4. **DC motor speed control**
5. **Four-quadrant operation of DC motor**
6. **Torque-load angle characteristic and speed control of Permanent AC motor**
7. **Determination of Induction motor parameters**
8. **Torque-speed characteristic and speed control of Induction motors.**