

**EE8661 POWER ELECTRONICS AND DRIVES LABORATORY**

DETAILED SYLLABUS

**OBJECTIVES:**

- To provide hands on experience with power electronic converters and testing.

**LIST OF EXPERIMENTS**

- 1 Gate Pulse Generation using R, RC and UJT.
- 2 Characteristics of SCR and TRIAC
- 3 Characteristics of MOSFET and IGBT
- 4 AC to DC half-controlled converter
- 5 AC to DC fully controlled Converter
- 6 Step down and step up MOSFET based choppers
- 7 IGBT based single phase PWM inverter
- 8 IGBT based three phase PWM inverter
- 9 AC Voltage controller
- 10 Switched mode power converter.
- 11 Simulation of PE circuits (1 $\Phi$  & 3 $\Phi$  semi converters, 1 $\Phi$  & 3 $\Phi$  full converters, DC-DC converters, AC voltage controllers).
- 12 Characteristics of GTO & IGCT.
- 13 Characteristics of PMBLDC motor