

POWER ELECTRONICS LABORATORY

The objective of the Power Electronics laboratory is to study the characteristics of switching devices and its applications in Rectifiers, AC voltage controllers, Inverter and Choppers. It also acquaint with the application of power electronic devices for conversion, control and conditioning of electric power. Further it aids the students to acquire an overview of different types of power semiconductor devices and to cognize the operation, characteristics and performance parameters of controlled rectifiers. The principle of operation, switching techniques, modulation techniques and harmonic reduction techniques in PWM inverters are studied in the lab. It also provides experience with common components such as motors, batteries and power semiconductors. The lab facilitates faculty and students who are conducting research, industry sponsored projects in power converters in particular and electrical energy conversion in general.

Facilities:

- Silicon controlled rectifier
- TRAIC
- DIAC
- MOSFET and IGBT Characteristics study unit
- Operational Amplifier Trainer
- DC Chopper power unit
- UJT firing circuit
- Forced Commutation study unit
- Fully controlled converter power circuit
- Cyclo converter power circuit
- Parallel Inverter
- Half controller converter power circuit
- Series Inverter
- AC voltage controller
- Power scopes.

PHOTOS:

