

Central Instrumentation Facility (CIF)

The Central Instrumentation Facility (CIF) at GLA University serves as a state-of-the-art research hub, equipped with advanced scientific instruments to support cutting-edge research and innovation. Designed to cater to the diverse analytical and experimental needs of researchers, faculty members, and students, the CIF fosters intellectual growth and promotes scientific perception through interdisciplinary collaborations and high-impact studies across various domains. By providing access to sophisticated instrumentation, expert guidance, and technical support, the facility plays a pivotal role in enhancing the quality of research and development at the university, reinforcing its commitment to academic and industrial excellence.

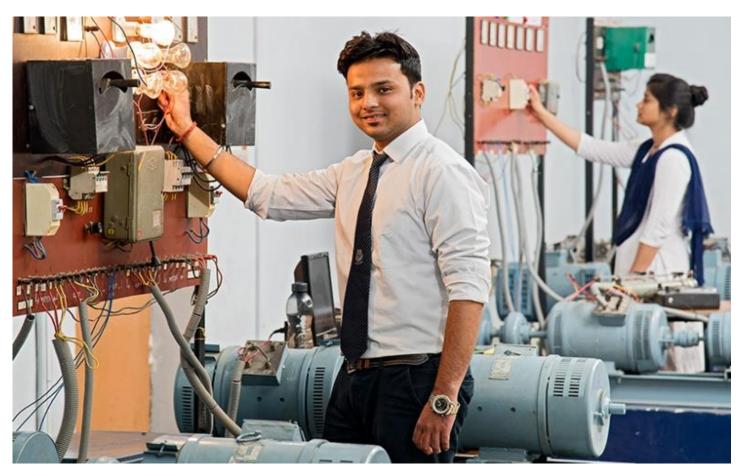
Department of Electrical and Electronics Engineering

Basic Electrical and Electronics Engineering Lab

- Single-Phase Transformer
- Resistive and Inductive Load
- Single-Phase Auto Transformer
- Wattmeter, Ammeter, Voltmeter with Various Rating
- ➤ Single-Phase Induction Motor
- Function Generator, CRO, DSO
- DC And AC Supply System with Various Rating
- RLC and Logic Gate Kit
- Analog and Digital Energy Meter Testing Panel













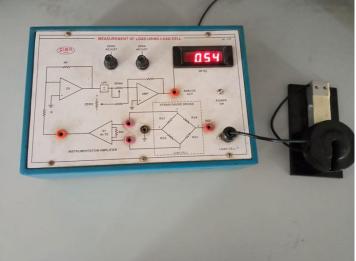


Simulation Software: MATLAB and Pspice

Electrical Instrumentation & Measurement Lab

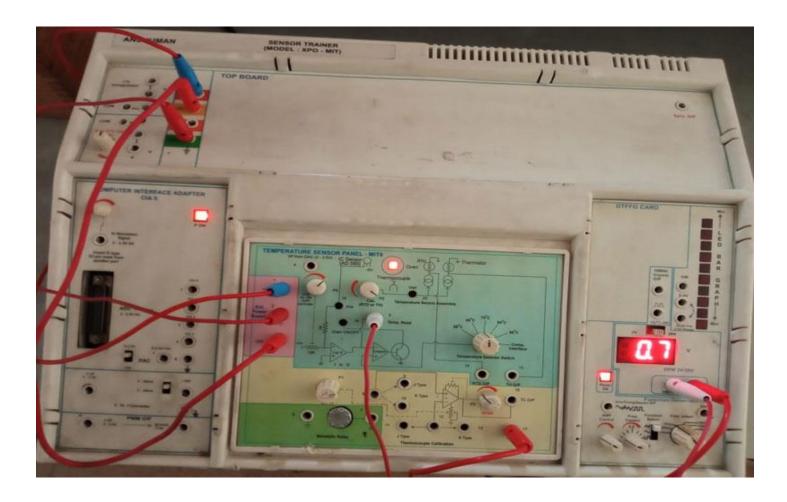
- Analog Oscilloscope
- Digital Storage Oscilloscope (DSO)
- > Function Generator
- Digital multi-meter
- Different AC Bridges
- Digital Megger
- > Capacitance Box
- > LVDT Trainer Kit
- > Transducer Trainer Kit
- ➤ Load Cell, Distortion Factor Meter











Software Packages: MATLAB and Pspice

Rockwell Automation Lab

- Industrial Automation Training Kit with CompactLogix™ 5370 Controller
- Kinetix® Servo Drives
- PowerFlex ® Variable Frequency Drives

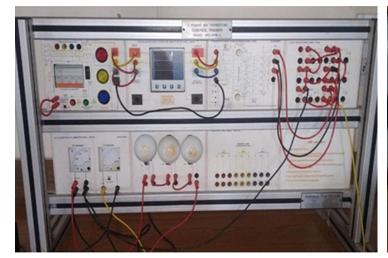


Power Electronics Lab

- Power Electronics Trainer Kit
- Three Phase Hv Thyristor Control Trainer
- Three Phase Induction Motor Speed Control Trainer (VVVF)
- Brush Less DC Motor Trainer
- > DSO
- Power Scope
- Speed Control of Single-Phase Induction in Open and Closed Loop
- High Voltage Trainer for AC Voltage Controller
- Cyclo-Converter and Controller Rectifier
- > Speed Control of 3-Phase Induction Motor Using Chopper







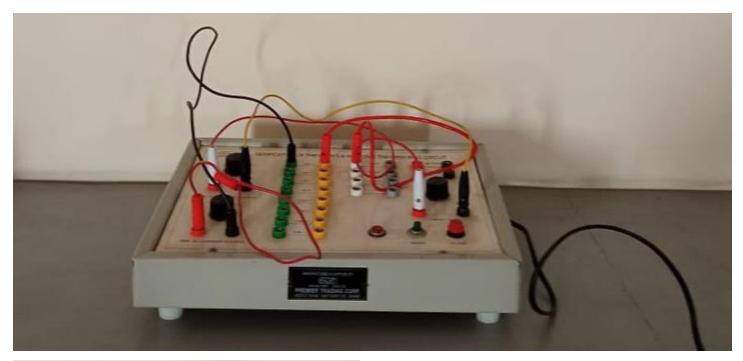






Network Lab

- Digital multi-meter
- Digital Storage Oscilloscope
- Function Generator
- Autotransformer
- > Analogue Terminal Panel for Laboratory Work and Experimentation
- ➤ Verification of Thevenin's and Norton's Theorem, Superposition Theorem for AC Circuit Kit
- Determination of Two Port Parameters
- Software OrCAD PSpice











Electrical Simulation Lab

- PSpice
- MATLAB
- > PSIM
- ➤ ETAP
- DSpace



Solar Energy Lab

- PV Grid Tied System
- PV Emulator
- Energy Audit Kit
- PV Training System and Other Solar Based Applications









Electrical Machines Lab

- DC Shunt Machine
- ► 1-Phase and 3-Phase Induction Machine
- > 3-Phase Alternator
- > 1-Phase Transformer
- > 3-Phase Transformer
- DC Compound Machine
- Resistive Load, Inductive Load
- > Tachometer (Both Contact and Non-Contact Type)
- ➤ 1-Phase and 3-Phase VARIAC









Control System Lab

- DC Position Control
- > AC-DC Servomotor
- > Temperature Control and Response Analysis Using PID
- Control Design Using Fuzzy Logic Controller
- Lead-Lag Compensators
- Stepper Motor
- Synchro-Transmitter and Receiver







Power System Lab

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- ➤ High Voltage Trainer for AC Voltage Controller
- Cyclo-Converter and Controlled Rectifier
- Speed Control of 3-Phase Induction Motor Using Chopper





