FACULTY TRAINING PROGRAMME

Developing Power System Numerical Relay Experiments

Hands-on training to set up power system relay laboratory.

IIT Kharagpur
Dept. of Electrical Engineering

Apr 24 - Apr 25, 2026

About the Programme

A two-day training programme on power system numerical relay experiment set up for B.Tech and M.Tech programmes. The programme focuses on hands-on training on numerical relay experiments using CTs and PTs connected to actual protection relays for transmission line and transformer.

Outcome: Following the training, participants will be able to setup these experiments in their own lab.

Schedule

Day 1: April 24, 2026

FIRST HALF

Detailed Description
In-depth look at four relay experiment setups.

SECOND HALF

Demonstration & Practice
Hands-on engagement with the equipment.

Figure 1: Typical setup connecting CTs/PTs to an industrial relay for line protection.

Day 2: April 25, 2026

FIRST HALF

Practice Session
Focused practice on relay experiments.

SECOND HALF

PMU & Practical Issues
PMU-based experiments and discussion on practical lab setup issues.

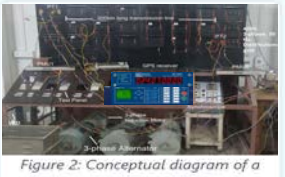
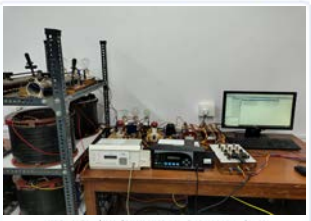


Figure 2: Conceptual diagram of a PMU monitoring grid parameters.

Laboratory Setup (Training Facility)



Numerical Overcurrent Relay

Numerical Directional Relay

Numerical Differential Relay

Numerical Distance Relay

Programme Highlights

Four Numerical Relay Experiments:

- (1) Overcurrent relay characteristic verification and relay-coordination
- (2) Directional Overcurrent Relay Experiment
- (3) Distance protection of three phase transmission line
- (4) Differential protection of three phase transformer

- Hands-on setup, testing and validation.
- Phasor measurement unit (PMU)-based experiments.
- Guidance on relay selection, vendors, CT/PT selection, and experiment manuals.

Registration

REGISTRATION FEE
₹ 5,000

Note:
We have limited entries. Shortlisting will be based on a first-come, first-served basis.

VENUE
Relay Laboratory, Department of Electrical Engineering, IIT Kharagpur

ACCOMMODATION
Accommodation will be provided in our guest house on a paid basis.

DATES
Apr 24 - Apr 25, 2026

CONTACT

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