POWER SYSTEM PROTECTION AND RELAY COORDINATION

Advance Electrical Design & Engineering Institute (AEDEI) ISO 9001:2008 Certified Institute of Electrical Design & Engineering training programs for Dedicated to Electrical Engineers . AEDEI is latest venture for providing the quality education in the best possible

THREE DAYS TRAINING ON RELAY COORDINATION (ADVANCED LEVEL)

Relay Fundamental principle

Relay Setting Calculations

Hands on Concept

Ground-fault protection → Transformer protection → Generator protection → Differential protection → Distance protection → Bus bar Protection → Over Current Protection

	Complete by	*TRAINING SCHEDULE DAY-1*
☐	Time: 10 :00AM	Introduction to power system protection and (ANSI Code of relay)
☐	Time: 11:00AM	Power system Protection concepts (Type of protection)
☐	Time: 12:00 PM	Power System Protection philosophies
☐	Time: 12:00 PM	**LUNCH BREAK**
☐	12:30 PM	Short-circuit calculations (Ohmic Methodology / Per Unit Calculation (IEC 60909/ IEEE 242 :1986))
☐	13:30 PM	Instrument Transformer (CT's, PT's) selection & application
☐	14 :30 PM	Ground fault protection calculation and Criteria for setting pickups and time dial (TMS and PMS) for DMT and IDMT relays
☐	15 :30 PM	Step by step relay setting and co-ordination exercise for ground fault relays
☐	16 :00 PM	Ground fault relay (ABB , Alstom (MICOM), SIEMENS Relay setting and concept review
☐	16 :30PM	QUESTIONNAIRES SESSION

	Complete by	*TRAINING SCHEDULE DAY-2*

☐	Time: 10 :00AM	Fundamentals of Transformers, Vector group; tap changer; parallel operation ; exciting current and third harmonic, inrush current and second harmonic.
☐	Time: 11:00AM	Protection against Overload; Overload v/s overcurrent, Overload capability, Short Circuit Protection; Phase overcurrent and Ground overcurrent Protection, Grounding of transformer neutral. Transformer internal faults (buchholz relay, Winding Relay, Oil relay, MOG, OSR, Over flux etc)
☐	Time: 12:00 PM	REF & Differential Protection for Transformer ; Comparison of REF and Differential Schemes, Application of REF protection , REF scheme
☐	Time: 12:00 PM	**LUNCH BREAK**
☐	12:30 PM	Transformer Differential Protection scheme, Differential Scheme for Three Winding Transformer, CT Specification for Differential and REF applications.
☐	13:30 PM	Bus bar protection, Overcurrent , earth fault , differential protection and type of bus bar protection
☐	14 :30 PM	Selection of bus bar relay , busbar relay calculation , setting of relays.
☐	15 :30 PM	Incoming and Outgoing feeder Relay selection Bus coupler Relay Setting
☐	16 :00 PM	Generator protection: Plain over current and voltage restrained over current protections, differential, REF
☐	16 :30 PM	QUESTIONNAIRES SESSION

	Complete by	***TRAINING SCHEDULE DAY-3***
☐	Time: 10 :00AM	Distance relay (Device 21) application and principles
☐	Time: 11:00AM	Distance Relay type (Mho, Impedance Relay), Calculation of distance relay
☐	Time: 12:00 PM	Selection of distance relay and setting of ABB, Alstom relays
☐	Time: 12:00 PM	**LUNCH BREAK**
☐	12:30 PM	Communication of distance and differential relays
☐	13:30 PM	Upstream and downstream relay coordination, breaker and relay tripping setting , protection zone selection.
☐	14 :30 PM	Overview of O&M of relays
☐	15 :30 PM	QUESTIONNAIRES SESSION
☐	16 :00 PM	Three days training Certificate distribution: **RELAY MASTER**

Instructor /faculty Experience & Area of specialization

A dynamic professional with over 20+ year experience in Electrical design engineering.
Core Experience : switchyard design & Engineering up to 765 KV, Railway traction OHE, Thermal power plant and solar power plant .
Expertise Area: Protection Schemes, Switchyard Engg.

Training Centre Address :

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About us

Advance Electrical Design & Engineering Institute (AEDEI) ISO 9001:2008 Certified Institute of Electrical Design & Engineering training programs for Dedicated to Electrical Engineers . **AEDEI** is latest venture for providing the quality education in the best possible facilities is a key aim of Skill developments for various verticals in Electrical Engineering design.

ELECTRICAL SYSTEM DESIGN COURSE : Our trained Electrical Design Engineers working in various filed of Electrical industries (Design & Engineering, develops and supervises the manufacture, installation, operation and maintenance of equipment, machines and systems for the generation, distribution, utilization and control of electric power **More..**

SOLAR POWER PLANT DESIGN & ENGINEERING COURSE : The most significant future of solar energy is that it clean energy does not harm environments **More..**

ENTREPRENEURSHIP SOLAR TRAINING : The most significant Business future of solar energy is that it clean energy does not harm environments **More..**

TECHNICAL TRANSFORMER DESIGN COURSE : Transformer Design tool assists design engineers in choosing the most appropriate core material and size for a number of turn ratio and housing **More..**

INSTRUMENTATION DESIGN COURSE: Automation & Instrumentation is the eyes and ears of the control system allowing the operators to see what is going on within the plant or system being controlled **More..**

TECHNICAL CABLE DESIGN COURSE : A very important topic in the design and engineering of Cable design is the ampacity of power cables, which can appear to be surprisingly good over the short term **More..**

Railway/metro Traction Design Course: Advance Electrical design & engineering institute will provide career opportunities for fresh as well as experienced engineers wanting to make a career in railway/metro traction OHE design & engineering training course in India . **More..**

Process Design Training Course :Process Design Engineering aims at providing professional industrial training & exposure to design principle for various Process industries - for Chemical Engineers.

PLC SCADA TRAINING COURSE

HVAC DESIGN

MEP DESIGN TRAINING COURSE

QA/QC-ELECTRICAL COURSE

POWER SYSTEM SOFTWARE DESIGN COURSE