

**Short Term Program Scheduled from October to December, 2024**

Sl. No.	Course	Period	Course fee for Indian participants in Rupees including GST@18%	
			Non-Residential	Residential
1	Condition Monitoring, RLA & LE of Substation Equipment	14.10.2024 to 18.10.2024	21,240/-	30,385/-
2	Energy Management & Audit of Substation (400/220kV)	21.10.2024 to 25.10.2024	21,240/-	30,385/-
3	Electrical Safety & Inspection of Electrical Installations, Accidents, Prevention & Recent Trends	21.10.2024 to 25.10.2024	21,240/-	30,385/-
4	Power Quality & Harmonics Mitigation and Reactive Power Management	04.11.2024 to 08.11.2024	21,240/-	30,385/-
5	Power System Communications SCADA & EMS	19.11.2024 to 23.11.2024	21,240/-	30,385/-
6	Electrical Safety & Inspection of Electrical Installations, Accidents, Prevention & Recent Trends	25.11.2024 to 29.11.2024	21,240/-	30,385/-
7	O&M of Transformers & Circuit Breakers	02.12.2024 to 06.12.2024	21,240/-	30,385/-
8	Power Cables & Jointing Techniques	09.12.2024 to 12.12.2024	18,880/-	26,314/-
9	Power Substation Design	16.12.2024 to 20.12.2024	21,240/-	30,385/-
10	Electrical Safety & Inspection of Electrical Installations, Accidents, Prevention & Recent Trends	16.12.2024 to 20.12.2024	21,240/-	30,385/-

## OCTOBER, 2024

### 1. Condition Monitoring, RLA & LE of Substation Equipment

Duration: 05 days

Duration: 05 days

Duration: 05 days

**Schedule: 14 - 18.10.2024**

**Rs. 21,240/-**

**Rs. 30,385/-**

**Course Outline:** RLA – Objective and Methods, Testing procedures and Methodologies, RLA of Oil filled transformers, RLA of Instrument Transformers, RLA of circuit breakers, RLA of other substation switchgear, RLA of power cables, Failure Analysis & condition Monitoring of Transformers oil, Testing and condition monitoring of circuit breakers

### 2. Energy Management & Audit of Substation (400/220kV)

Duration: 05 days

Non-Residential course fee inclusive of GST per participant (INR)

Residential course fee inclusive of GST per participant (INR)

**Schedule: 21-25.10.2024**

**Rs. 21,240/-**

**Rs. 30,385/-**

**Course Outline:** Definition, Energy audit – need, Types of energy audit Energy management (audit) approach-understanding energy costs, Bench marking, Energy performance, Matching energy use to requirement, Maximizing system efficiencies, Optimizing the input energy requirements, Fuel and energy substitution, Energy audit instruments.

### 3. Electrical Safety & Inspection of Electrical Installations, Accidents, Prevention & Recent Trends

Duration: 05 days

Non-Residential course fee inclusive of GST per participant (INR)

Residential course fee inclusive of GST per participant (INR)

**Schedule: 21-25.10.2024**

**Rs. 21,240/-**

**Rs. 30,385/-**

**Course Outline:** Legal and Statutory Requirements on Electrical Safety, Powers of EIs, Supplier and CESEs, Safe Work Practices, Earth Resistance & Earth Fault Loop Impedance, Voltage Classification and Interpretations of Regulations, Various Types of Earthing Arrangements and Design, Protection against Overvoltage, Lightning Arresters, Lightning Protection System, Relays, Protection & Coordination, Selection of Cables and Conductors, Transformers and DG Installations, Protection of Sensitive Devices against Conducted and Radiated Emissions, Case Study-An Integrated approach to Earthing Design, Verification & Testing and Fire Safety Measures

## NOVEMBER, 2024

### 4. Power Quality & Harmonics Mitigation and Reactive Power Management

Duration: 05 days

Non-Residential course fee inclusive of GST per participant (INR)

Residential course fee inclusive of GST per participant (INR)

**Schedule: 04-08.11.2024**

**Rs. 21,240/-**

**Rs. 30,385/-**

**Course Outline:** Introduction to power quality, Power Quality – impacts, manifestations, Consequences of power quality, Power quality measurement, Harmonics – sources, measurements and mitigation, Filters – Active and passive filters, selection of filters, Statcoms, custom power devices, Static Var Compensators, Reactive Power Control Equipment, Performance of Reactive Power Equipment under different Operating Conditions, Comparative Study of AVR, OLTCs, Power Capacitors, Shunt Reactors, SVCs, TCRs, Statcoms etc, in reactive power management, Automatic Power factor controllers, Harmonics – causes, measurement and mitigation, Thyristor based and voltage source converter based FACTS Controllers and Case Studies

<b>5. Power System Communications SCADA &amp; EMS</b>		
Duration: 05 days	Non-Residential course fee inclusive of GST per participant (INR)	Residential course fee inclusive of GST per participant (INR)
<b>Schedule: 19-23.11.2024</b>	<b>Rs. 21,240/-</b>	<b>Rs. 30,385/-</b>
<b>Course Outline:</b> Data Acquisition System, Supervisory Control, Communications – VSAT, Microwave, Optical fibre, Communication networks & Protocols, SCADA in Transmission and Distribution, EMS Hardware: SCADA, control centre, EMS Software: SCADA & Database, EMS Software: Generation applications, EMS Software: Network applications and Field Visits		
<b>6. Electrical Safety &amp; Inspection of Electrical Installations, Accidents, Prevention &amp; Recent Trends</b>		
Duration: 05 days	Non-Residential course fee inclusive of GST per participant (INR)	Residential course fee inclusive of GST per participant (INR)
<b>Schedule: 25-29.11.2024</b>	<b>Rs. 21,240/-</b>	<b>Rs. 30,385/-</b>
<b>Course Outline:-</b> Legal and Statutory Requirements on Electrical Safety, Powers of EIs, Supplier and CESEs, Safe Work Practices, Earth Resistance & Earth Fault Loop Impedance, Voltage Classification and Interpretations of Regulations, Various Types of Earthing Arrangements and Design, Protection against Overvoltage, Lightning Arresters, Lightning Protection System, Relays, Protection & Coordination, Selection of Cables and Conductors, Transformers and DG Installations, Protection of Sensitive Devices against Conducted and Radiated Emissions, Case Study-An Integrated approach to Earthing Design, Verification & Testing and Fire Safety Measures		

## DECEMBER, 2024

<b>7. O&amp;M of Transformers &amp; Circuit Breakers</b>		
Duration: 05 days	Non-Residential course fee inclusive of GST per participant (INR)	Residential course fee inclusive of GST per participant (INR)
<b>Schedule: 02-06.12.2024</b>	<b>Rs. 21,240/-</b>	<b>Rs. 30,385/-</b>
<b>Course Outline:</b> Transformers-Construction, connections, Tap Changing Mechanism & Parallel Operation, Selection and sizing of Transformer, Transformer Neutral Earthing and Substation, Earthing Practices, Testing of Transformers, Condition Monitoring of Transformers, Protection of Transformers, Maintenance of Transformers, Application and Design of Air and Gas Insulated Circuit Breakers, Selection, Sizing, Performance Analysis of Circuit Breakers, O&M of Circuit Breakers, Testing and Condition Monitoring of Circuit Breakers, Testing of Circuit Breakers and Field visits		
<b>8. Power Cables &amp; Jointing Techniques</b>		
Duration: 04 days	Non-Residential course fee inclusive of GST per participant (INR)	Residential course fee inclusive of GST per participant (INR)
<b>Schedule: 09-12.12.2024</b>	<b>Rs. 18,880/-</b>	<b>Rs. 26,314/-</b>
<b>Course Outline:</b> Design & construction of Power Cables, Testing of cables, Testing of cable accessories, Demo on Cable Jointing, Failure of cables and case studies, Condition monitoring of power cables, Power cable jointing techniques and Field Visits		

<b>9. Power Substation Design</b>		
Duration: 05 days	Non-Residential course fee inclusive of GST per participant (INR)	Residential course fee inclusive of GST per participant (INR)
<b>Schedule: 16-20.12.2024</b>	<b>Rs. 21,240/-</b>	<b>Rs. 30,385/-</b>
<p><b>Course Outline:-</b> Power Substation Design: Parameters &amp; Physical Layout - Types of substation - General design considerations - Site considerations parameters - IEEE guidelines for designs- Documents &amp; drawings required like : site comparison &amp; suitability evaluation - environment assessment - Substation design summary form - fundamental one line diagram - applications of zoning variance etc. - layout considerations - typical bus configuration - Insulation protection - Substation Insulators - Electrical clearances</p>		
<b>10. Electrical Safety &amp; Inspection of Electrical Installations, Accidents, Prevention &amp; Recent Trends</b>		
Duration: 05 days	Non-Residential course fee inclusive of GST per participant (INR)	Residential course fee inclusive of GST per participant (INR)
<b>Schedule: 16-20.12.2024</b>	<b>Rs. 21,240/-</b>	<b>Rs. 30,385/-</b>
<p><b>Course Outline:-</b> Legal and Statutory Requirements on Electrical Safety, Powers of EIs, Supplier and CESEs, Safe Work Practices, Earth Resistance &amp; Earth Fault Loop Impedance, Voltage Classification and Interpretations of Regulations, Various Types of Earthing Arrangements and Design, Protection against Overvoltage, Lightning Arresters, Lightning Protection System, Relays, Protection &amp; Coordination, Selection of Cables and Conductors, Transformers and DG Installations, Protection of Sensitive Devices against Conducted and Radiated Emissions, Case Study-An Integrated approach to Earthing Design, Verification &amp; Testing and Fire Safety Measures</p>		