

ELECTRICAL ENGINEER FOUNDATION PROGRAMME · 4 WEEKS

Where theory meets **the field.**

Field experience before your first job.

Four weeks on the instruments that test the grid, with two weeks of supervised field days on live assets. For final year students and fresh graduates.

FIRST BATCH

December 2026

DURATION

4 Weeks

LOCATION

New Delhi

Limited seats per batch — a single engineer can only supervise so many trainees on an energised site.

APPLICATIONS CLOSE 30 OCTOBER 2026

mtekpro.com/academy/academy-apply.html

Born inside a working testing company.

MTEKPRO Technologies has delivered precise electrical testing and measurement across India since 2011 — transformer testing, cable diagnostics, motor and generator condition evaluation, relay and switchgear testing, partial discharge analysis, onsite HV testing for GIS and power quality monitoring, for utilities, industries and EPC clients.

We work as affiliates of global principals, so the instruments in our cases are the ones the international industry uses — not trainers, and not equipment the sector retired twenty years ago.

MATE began with a gap we saw in our own hiring. Bright graduates could explain how a transformer works but had never tested one — not for lack of ability, but because the instruments that teach it are out on live sites, not in college labs. MATE brings those instruments, and the engineers who use them, to engineers at the start of their careers.

This is not a classroom course with a site visit bolted on. The testing is the course. Same instruments. Same engineers. Same live assets. Four weeks that put a working portfolio behind your degree.

TESTING SINCE

2011

PROJECTS DELIVERED

1000+

COUNTRIES

10+

CERTIFIED

ISO 9001

Commercial instruments

Train on the same instruments our engineers use on client sites.

15+ years experience

Theory sessions led by senior industry professionals.

Supervised field days

Practising site engineers beside you on live equipment.

Job assurance

On successful completion of the programme.



VLF testing in progress — MTEKPRO engineer on a client site.

The gap nobody tells you about.

Most engineers can be shown how to run a test in a day. Understanding what the result is telling you takes years — and it is learned on site, standing next to someone who already knows.

A reading comes back higher than expected. Is the insulation ageing? Is there moisture in it? Or is it simply a cold morning and a dirty surface? The instrument will not tell you which. Someone has to.

On your first site visit somebody hands you an instrument and asks for a number. Every engineer should have had a MATE standing next to them.

India is building 191,000 circuit kilometres of new transmission line by 2032. Every kilometre has to be tested and commissioned before it carries a single unit of power — by people, one instrument at a time. The country is short of those people.

₹9.15 lakh crore

committed to transmission infrastructure by 2032, alongside 1,270 GVA of new transformation capacity. Every unit of it has to be proven before it is energised.



Motor condition monitoring.



Series resonant test set for onsite HV testing.

Six disciplines. One employable engineer.

Each discipline is built around the failure modes of a class of asset, the tests that find them, and the standards that govern the result — the same service lines MTEKPRO delivers to utilities, industry and EPC clients. The Foundation Programme covers the core of each; deeper modules run separately for working engineers.



MTK-TT

Power Transformers

Testing and condition assessment of power transformers.



MTK-ND

Lab / NDT Diagnostics

Oil diagnostics, DGA and residual life assessment.



MTK-SS

Substation Equipment

Breakers, CTs, relays, earthing and commissioning.



MTK-CT

Power Cables

VLF testing, diagnostics and fault location.



MTK-RM

Rotating Machines

Motors and generators — static and dynamic testing.



MTK-HV

High Voltage Testing

Resonant testing and GIS commissioning.

Power Transformers **MTK-TT**

Testing and condition assessment of power transformers.

- Turret-CT checks before erection — IR, magnetising current, ratio, polarity
- Turns ratio, vector group, magnetic balance and magnetising current
- IR with PI and DAR, winding resistance, bushing capacitance and tan delta
- SFRA to IEC 60076-18, OLTC operation, and DCRM with analyser
- Buchholz, WTI and OTI checks; spill current and stability measurement
- Online PD monitoring using UHF drain-valve and piezoelectric acoustic sensors

IEC 60076-1/-3/-18 · IEEE C57.152 · C57.149 · IEC 60270

Lab / NDT Diagnostics **MTK-ND**

Oil diagnostics, DGA and residual life assessment.

- Sampling discipline, and why a bad sample voids a perfect analysis
- Dielectric breakdown voltage, moisture in ppm, acidity and interfacial tension
- Dissolved gas analysis to IEC 60567 — key gases and what produces them
- Furfural analysis and degree of polymerisation to estimate remaining life
- Thermographic and IR scanning; physical condition and nameplate verification
- Repeatability, calibration chains, and what makes a result defensible

IEC 60567 · IEC 60814 · IEC 61198 · IS 335 / IEC 60156 · IS 1866

Substation Equipment **MTK-SS**

Breakers, CTs, relays, earthing and commissioning.

- Circuit breaker timing, static contact resistance and DCRM with analyser
- Close and trip coil current and resistance; SF6 dew point to IEC 60376
- CT polarity, ratio, knee-point voltage for PS class, capacitance and tan delta
- CVT and PT stack tan delta; isolator contact resistance; lightning arresters
- Secondary injection on relays; protection, control and annunciation checking
- Battery charge and discharge cycles; ACDB and DCDB insulation; energisation support

IEC 62271-100/-102 · IEC 61869 · IEC 60255 · IEC 60099-4 · IEEE 450

Power Cables **MTK-CT**

VLF testing, diagnostics and fault location.

- Cable sheath testing and insulation resistance measurement
- VLF AC withstand testing and DC hipot — and why VLF rather than DC on XLPE
- Tan delta testing to grade the extent of insulation degradation
- Online partial discharge detection with GPS-synchronised positioning
- Cable identification, route tracing, fault localisation and pinpointing
- Reading a defect — splices, terminations and the extent of degradation

IEEE 400.1/.2/.3 · IEC 60502 / 60840 · IEC 60060-3

Rotating Machines **MTK-RM**

Motors and generators — static and dynamic testing.

- Online motor testing — MCSA, vibration, ultrasonic, thermography, bearings
- Stator offline — IR and PI, dielectric absorption, step voltage, DC and AC hipot
- Surge testing, impedance, current frequency response and phase angle
- Rotor — insulation resistance and PI, impedance and winding resistance
- Generator PD measurement, capacitance and tan delta, leakage current
- Bearing defect analysis and what a vibration spectrum is telling you

IEEE 43 · IEEE 95 · IEEE 522 · IEC 60034-27 · ISO 20816 / 20958

High Voltage Testing **MTK-HV**

Resonant testing and GIS commissioning.

- Onsite high voltage testing for GIS up to 220 kV
- AC withstand testing using series resonant test sets
- Partial discharge diagnostics during withstand — acoustic, TEV, UHF and HFCT
- GIS commissioning, acceptance testing and insulation integrity assessment
- PD localisation and pinpointing inside a switchgear panel
- Test area safety, clearances, earthing discipline and permit-to-work

IEC 62271-203 · IEC 60060-3 · IEC 60270 · IEC TS 62478

Half the course is on site.

Two weeks at our New Delhi centre and two weeks of supervised field days. The exact sequence follows live client work, so what you test and when varies — but every cohort covers the same ground.

Safety first, always

Permit-to-work, isolation, earthing and the discipline that governs working anywhere near live equipment.

Running the tests yourself

Across all six disciplines — you set up, you connect, you run the test and you record the result. Nobody does it for you.

Reading the result

The part that takes years on the job — what a number means, what it rules out, and what you do next.

Supervised field days

Two weeks out with our engineers on live client assets, in the conditions the work is actually done in.

Reporting and sign-off

Writing the test report, presenting a finding and defending it — the half of the job nobody teaches.

A logged record

Every instrument you operate and every hour you spend on it, documented and issued with your certification.



Motor condition monitoring — live three-phase waveforms.



VLF testing on a 10 kV feeder.

Travel costs are included for field training outside Delhi NCR. Batch size is deliberately small — a single engineer can only supervise so many trainees on an energised site.

Four weeks between your degree **and the job.**

1

Submit the enquiry form at
mtekpro.com/academy/academy-apply.html

2

Our team comes back with **shortlisting details and next steps**

3

A short conversation to confirm **fit, dates and logistics**

4

Confirm your seat for the **December 2026 batch**

APPLY NOW · APPLICATIONS CLOSE 30 OCTOBER 2026

WRITE TO US

info@mtekpro.com

APPLY ONLINE

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CALL US

+91-9810706882
011 3500 9275

CENTRE

28, Second Floor, Okhla Industrial Estate Phase-III, New Delhi 110020