



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aaticd.co.za · Website: www.aaticd.co.za

COURSE BROCHURE

Electronic Test Instruments Operation

Physical, Mathematical, Computer and Life Sciences / Information Technology and Computer Sciences

Unit Standard 259170 · NQF Level 4 · 5 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the practical skills and theoretical knowledge required to safely and effectively operate a range of electronic test instruments, including multimeters, oscilloscopes, and signal generators. Participants will learn to set up, calibrate, and interpret measurements from these devices, ensuring accurate data collection for troubleshooting and quality assurance in electronic systems.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Information Technology and Computer Sciences
Unit Standard	259170
Accreditation	SAQA Accredited · NQF Level 4 · 5 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate the correct setup and calibration of electronic test instruments according to manufacturer specifications.
- Apply safety procedures when connecting and operating test instruments on live circuits.
- Analyze measurement readings from oscilloscopes, multimeters, and signal generators to diagnose circuit faults.
- Evaluate the accuracy and precision of measurements by considering instrument specifications and environmental factors.
- Implement troubleshooting techniques using test instruments to identify and rectify common electronic faults.
- Document test results and procedures in a clear and professional manner for reporting and quality assurance.

WHO SHOULD ATTEND

- Technicians, engineers, and electronics enthusiasts who need to operate electronic test instruments in a workplace or laboratory environment.
- This course is ideal for those seeking to enhance their practical measurement skills for maintenance, repair, or product development roles.

COURSE OUTLINE

Day 1: Fundamentals of Electronic Test Instruments

- Introduction to electronic test instruments and their applications.
- Safety precautions and handling of equipment.
- Multimeters: types, functions, and measurement techniques.
- Oscilloscopes: controls, probes, and waveform display.
- Signal generators: waveform types, frequency, and amplitude settings.
- Power supplies: constant voltage and constant current modes.
- Hands-on practice with basic measurements.
- Troubleshooting common measurement errors.

Day 2: Advanced Instrument Operation and Practical Integration

- Advanced oscilloscope features: triggering, cursors, and math functions.
- Spectrum analyzers: frequency domain measurements.
- LCR meters: measuring inductance, capacitance, and resistance.
- Data logging and computer interfacing.
- Systematic troubleshooting using test instruments.
- Calibration principles and checks.
- Practical exercises: testing amplifiers, filters, and power supplies.
- Review and assessment.

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **5 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,300.00	R 11,300.00
1	In-House	R 14,700.00	R 14,700.00
1	On-Campus (Pretoria)	R 17,000.00	R 17,000.00

UPCOMING SESSIONS

No sessions are currently scheduled. Please contact us to arrange a session at a time and location that suits your team.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 259170) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call +27 12 004 8389 or WhatsApp +27 65 077 6310 and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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