



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@aatikd.co.za · Website: www.aatikd.co.za

COURSE BROCHURE

Demonstrate Understanding Of Aircraft Instrumentation Training

Law, Military Science and Security / Safety in Society

Unit Standard 120045 · NQF Level 5 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the fundamental knowledge required to understand aircraft instrumentation systems. It covers the principles, operation, and interpretation of key flight instruments, enabling learners to apply this understanding in an aviation maintenance or operational environment.

Category	Law, Military Science and Security
Subfield	Safety in Society
Unit Standard	120045
Accreditation	SAQA Accredited · NQF Level 5 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate an understanding of the principles and operation of pitot-static instruments.
- Explain the function and operation of gyroscopic instruments.
- Interpret readings from engine and flight instruments.
- Apply knowledge of instrument systems to identify common faults.
- Analyze the impact of instrument errors on flight safety.

WHO SHOULD ATTEND

- This course is designed for aircraft maintenance technicians, aviation engineering students, and flight operations personnel who need a foundational understanding of aircraft instrumentation.

COURSE OUTLINE

Day 1: Fundamentals of Aircraft Instrumentation Systems

- Introduction to aircraft instrumentation: categories and regulatory requirements.
- Pitot-static system: altimeter, airspeed indicator, vertical speed indicator.
- Gyroscopic instruments: attitude indicator, heading indicator, turn coordinator.
- Engine instruments: tachometer, oil pressure/temperature gauges, fuel quantity.
- Navigation instruments: compass, VOR, ADF, GPS basics.
- Instrument markings: colour arcs, range markings, and placards.
- Principles of instrument error and calibration.
- Overview of cockpit layout and instrument panel organisation.

Day 2: Advanced Systems and Electronic Flight Instrumentation

- Introduction to EFIS: architecture and components.
- Primary flight display (PFD): attitude, airspeed, altitude, vertical speed, heading.
- Multi-function display (MFD): navigation, weather, engine parameters.
- Air data computer (ADC) and pitot-static system integration.
- Inertial reference systems (IRS) and GPS integration.
- Flight management system (FMS) basics.
- System redundancy, self-test, and failure annunciation.
- Comparison of analogue vs. digital instrument reliability and maintenance.

Day 3: Practical Application, Troubleshooting, and Regulatory Compliance

- Troubleshooting pitot-static and gyroscopic instrument faults.
- Using test equipment: pitot-static test sets, gyroscope testers.
- Reading and interpreting wiring diagrams and system schematics.
- Regulatory framework: SACAA Part 43, CARs, and SAQA unit standards.
- Documentation: logbook entries, maintenance release, and defect reporting.
- Pre-flight inspection procedures for instrument panels.
- Case studies: common instrument failures and corrective actions.
- Integration of knowledge: scenario-based assessment and practical exercises.

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 **6 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 18,800.00	R 18,800.00
1	In-House	R 24,500.00	R 24,500.00
1	On-Campus (Pretoria)	R 28,100.00	R 28,100.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	12 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	12 Aug 2026	On-Campus	Mauritius
11 Aug 2026	13 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	13 Aug 2026	On-Campus	Cape Town, South Africa
12 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
12 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	19 Aug 2026	On-Campus	Harare, Zimbabwe
17 Aug 2026	19 Aug 2026	On-Campus	Abu Dhabi, UAE

Contact us if no suitable date is listed – on-demand sessions can be arranged for groups.

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 120045) 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.

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 · WhatsApp: +27 65 077 6310 · apply@aaticd.co.za · www.aaticd.co.za