



Accredited Africa Training Institute for Capacity Development

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

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COURSE BROCHURE

Aerobatic Manoeuvres for Pilots

Physical, Mathematical, Computer and Life Sciences / Physical Sciences

Unit Standard 243324 · NQF Level 5 · 9 Credits · 6 Days

COURSE OVERVIEW

This course equips pilots with the advanced skills and knowledge required to safely and competently perform aerobatic manoeuvres. It covers the theoretical principles of aerobatic flight, aircraft limitations, and emergency procedures, ensuring pilots can execute manoeuvres with precision and confidence while adhering to civil aviation regulations.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Physical Sciences
Unit Standard	243324
Accreditation	SAQA Accredited · NQF Level 5 · 9 Credits
Duration	6 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate pre-flight planning and aircraft inspection specific to aerobatic flight.
- Execute basic aerobatic manoeuvres including loops, rolls, and spins with proper technique.
- Analyze aircraft performance limitations and load factors during manoeuvres.
- Apply emergency recovery procedures for unusual attitudes and system failures.
- Evaluate personal physiological limits and manage G-force effects.
- Comply with South African Civil Aviation Authority (SACAA) regulations for aerobatic operations.

WHO SHOULD ATTEND

- This course is designed for licensed pilots seeking to add aerobatic endorsements to their qualifications, including those pursuing recreational, instructional, or competitive flying opportunities.

COURSE OUTLINE

Day 1: Principles of Aerobatic Flight

- Aerodynamics of manoeuvring flight
- Load factor, stall speeds, and G-tolerances
- Aircraft limitations and V-N diagram
- Pre-flight planning and safety briefings
- Use of controls: aileron, elevator, rudder
- Energy state: kinetic vs potential energy

Day 2: Basic Manoeuvres – Loops and Rolls

- Loop: entry speed, back pressure, apex, recovery
- Slow roll: aileron input, rudder coordination, nose attitude
- Barrel roll: combination of loop and roll
- Common mistakes: over-rotation, speed loss, disorientation
- Practice sequences and trim settings

Day 3: Advanced Manoeuvres – Stalls, Spins, and Hammerheads

- Stall recognition and recovery techniques
- Spin aerodynamics: autorotation, incipient, developed
- Spin recovery: PARE method (Power, Ailerons, Rudder, Elevator)
- Hammerhead: vertical line, pivot, recovery
- Spiral dive vs spin: identification and recovery
- Safety: altitude awareness and emergency procedures

Day 4: Precision Manoeuvres – Cuban Eights and Immelmann Turns

- Cuban Eight: 45° downline, half-roll, pull-through
- Immelmann: half-loop to inverted, half-roll upright
- Split-S: half-roll inverted, half-loop down
- Energy conservation: throttle and pitch management
- Sequence planning for competition or display
- Common errors: altitude loss, asymmetric loops

Day 5: Competition and Display Sequences

- Aresti notation: symbols and sequence construction
- Known, free, and unknown sequences
- Judging: positioning, symmetry, and flow
- Display safety: box dimensions, crowd lines, minimum altitudes
- Sequence practice: linking manoeuvres
- Emergency actions: abort points and recovery options

Day 6: Integration and Assessment

- Full sequence practice flight
- Debrief and performance analysis
- Risk management: weather, aircraft serviceability, pilot readiness
- Competency assessment criteria
- Post-flight documentation and logbook entries
- Continuous improvement and future training pathways

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 **9 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 26,900.00	R 26,900.00
1	In-House	R 35,000.00	R 35,000.00
1	On-Campus (Pretoria)	R 40,300.00	R 40,300.00

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 243324) 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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