



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

Production Tooling Maintenance and Repair

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 258722 · NQF Level 3 · 16 Credits · 13 Days

COURSE OVERVIEW

This course equips learners with the skills to maintain and repair production tooling in a manufacturing environment. Participants will learn to inspect, diagnose, and restore tooling to operational standards, ensuring minimal downtime and sustained production quality. The training aligns with the SAQA unit standard 258722 and focuses on practical, hands-on competencies.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	258722
Accreditation	SAQA Accredited · NQF Level 3 · 16 Credits
Duration	13 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate the ability to inspect production tooling for wear, damage, or defects using appropriate measurement instruments.
- Apply correct maintenance procedures to prolong tooling life and prevent unexpected failures.
- Diagnose common tooling faults and determine the root cause of malfunctions.
- Perform repairs on production tooling using suitable tools, materials, and techniques.
- Evaluate the effectiveness of repairs and adjustments to ensure tooling meets operational specifications.
- Implement safe work practices and comply with relevant health, safety, and environmental regulations during maintenance activities.

WHO SHOULD ATTEND

- This course is intended for maintenance technicians, toolmakers, and production supervisors who are responsible for the upkeep and repair of production tooling in manufacturing or engineering environments.

COURSE OUTLINE

Day 1: Introduction to Production Tooling and Maintenance Principles

- Overview of production tooling: dies, jigs, fixtures, moulds.
- Types of maintenance: preventive, predictive, corrective.
- Maintenance planning and scheduling basics.
- Safety regulations and PPE requirements.
- Introduction to maintenance documentation.

Day 2: Tooling Materials and Wear Mechanisms

- Tool steels, carbides, ceramics, and coatings.
- Wear types: abrasive, adhesive, fatigue, corrosion.
- Tool life factors: speed, feed, temperature.
- Introduction to lubrication and cooling.
- Material selection for specific applications.

Day 3: Inspection and Measurement Techniques

- Precision measuring instruments: callipers, micrometres, gauges.
- Visual inspection methods and defect identification.
- Surface finish measurement.
- Data recording and reporting.
- Introduction to non-destructive testing (NDT).

Day 4: Disassembly and Cleaning of Tooling

- Disassembly procedures and sequence.
- Cleaning agents and methods: solvents, ultrasonic, abrasive.
- Component identification and labelling.
- Handling and storage of parts.
- Safety during disassembly and cleaning.

Day 5: Repair Techniques: Welding and Brazing

- TIG, MIG, and stick welding overview.
- Brazing vs. welding for tooling.
- Filler material selection.
- Pre- and post-heat treatment.
- Weld inspection and defect identification.

Day 6: Grinding and Machining for Tool Restoration

- Surface grinding, cylindrical grinding, tool and cutter grinding.
- Grinding wheel selection and dressing.
- Machining operations: milling, turning.
- Achieving dimensional accuracy.
- Safety in grinding and machining.

Day 7: Heat Treatment and Surface Coating

- Annealing, hardening, tempering, stress relieving.
- Heat treatment furnaces and controls.
- Surface coatings: PVD, CVD, nitriding.
- Coating selection for wear resistance.

- Hardness testing methods.

Day 8: Assembly and Alignment of Tooling

- Assembly procedures and torque specifications.
- Alignment techniques: dial indicators, laser alignment.
- Clearance and interference fits.
- Fasteners and locking methods.
- Assembly documentation.

Day 9: Preventive Maintenance Scheduling and Lubrication

- Preventive maintenance planning.
- Lubrication types: oils, greases, solid lubricants.
- Lubrication methods: manual, automatic.
- Lubrication schedules and records.
- Condition monitoring basics.

Day 10: Troubleshooting Common Tooling Failures

- Failure modes: cracking, chipping, deformation, wear.
- Root cause analysis techniques (5 Whys, fishbone).
- Corrective actions: adjustment, repair, replacement.
- Troubleshooting flowcharts.
- Case studies of typical failures.

Day 11: Tooling Modification and Improvement

- Design for maintainability and improvement.
- Material and geometry modifications.
- Adding features: cooling channels, coatings.
- Prototyping and testing.
- Documentation of modifications.

Day 12: Quality Control and Documentation

- Quality control procedures and checklists.
- Dimensional and functional testing.
- Maintenance reporting formats.
- Tooling history and traceability.
- Introduction to ISO 9001 and ISO 14224.

Day 13: Integration, Review, and Assessment

- Comprehensive maintenance project.
- Review of all maintenance phases.
- Assessment of practical skills.
- Feedback and improvement areas.
- Career pathways and continuous learning.

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 **16 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 43,500.00	R 43,500.00
1	In-House	R 56,600.00	R 56,600.00
1	On-Campus (Pretoria)	R 65,200.00	R 65,200.00

UPCOMING SESSIONS

Start	End	Method	Venue
04 Aug 2026	20 Aug 2026	On-Campus	Johannesburg, South Africa
05 Aug 2026	21 Aug 2026	On-Campus	Mauritius
06 Aug 2026	24 Aug 2026	On-Campus	Cape Town, South Africa
07 Aug 2026	25 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	26 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	27 Aug 2026	On-Campus	Durban, South Africa
11 Aug 2026	27 Aug 2026	On-Campus	Mauritius
12 Aug 2026	28 Aug 2026	On-Campus	Cape Town, South Africa

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 258722) 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