



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

Sheet Metal Cutting and Forming to Specifications

Agriculture and Nature Conservation / Secondary Agriculture

Unit Standard 246764 · NQF Level 2 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the practical skills and theoretical knowledge required to cut and form sheet metal accurately to specified dimensions and tolerances. Participants will master the use of hand tools, power tools, and forming equipment, ensuring compliance with industry standards and safety regulations. The course prepares learners for productive employment in manufacturing, engineering, and fabrication sectors.

Category	Agriculture and Nature Conservation
Subfield	Secondary Agriculture
Unit Standard	246764
Accreditation	SAQA Accredited · NQF Level 2 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Interpret engineering drawings and specifications to determine cutting and forming requirements for sheet metal components.
- Select and set up appropriate hand tools, power tools, and forming equipment for specific sheet metal tasks.
- Apply safe working practices and use personal protective equipment (PPE) during cutting and forming operations.
- Cut sheet metal accurately using shears, guillotines, and power saws, achieving specified dimensions and edge quality.
- Form sheet metal into required shapes using bending machines, rollers, and manual techniques such as hammering and folding.
- Inspect finished components against specifications, identify defects, and implement corrective actions.

WHO SHOULD ATTEND

- This course is designed for artisans, technicians, and production workers in the metal fabrication industry who need to develop or refine their sheet metal cutting and forming skills.
- It is also suitable for apprentices and learners enrolled in engineering or manufacturing learnerships.

COURSE OUTLINE

Day 1: Introduction to Sheet Metal Cutting and Forming

- Overview of sheet metal cutting and forming processes.
- Types of sheet metal: steel, aluminium, stainless steel, copper, brass.
- Material properties: thickness, tensile strength, ductility.
- Safety in the workshop: PPE, machine guarding, emergency procedures.
- Introduction to hand tools: snips, hammers, mallets, files.
- Introduction to machine tools: guillotines, press brakes, rollers.

Day 2: Cutting Techniques and Equipment

- Hand cutting tools: straight snips, curved snips, aviation snips.
- Power shears: electric and pneumatic shears, nibblers.
- Guillotine operation: setting back gauge, cutting sequence.
- Cutting parameters: blade clearance, rake angle.
- Maintenance of cutting tools: sharpening, lubrication.
- Quality checks: burr removal, edge finish.

Day 3: Forming Processes – Bending and Folding

- Bending theory: neutral axis, bend radius, springback.
- Press brake operation: tooling selection, tonnage.
- Bend allowance formulas and calculations.
- Folding machines: box and pan, leaf brakes.
- Common forming defects: cracking, wrinkling.
- Inspection of formed parts: angle measurement, flatness.

Day 4: Advanced Forming – Rolling, Curving, and Punching

- Slip roll forming: roll adjustment, rolling cylinders and cones.
- Punching and notching: tooling, alignment, safety.
- Flanging and joggling: purpose and methods.
- Curving techniques for architectural panels.
- Troubleshooting: misalignment, tool wear, material handling.
- Quality control: dimensional accuracy, surface defects.

Day 5: Integration, Quality Assurance, and Final Assessment

- Project planning: interpreting drawings, material selection, sequence of operations.
- Quality assurance: using callipers, micrometers, gauges.
- Industry standards: SANS, ISO, customer specifications.
- Documentation: inspection reports, non-conformance reports.
- Final practical project: fabricate a sheet metal component to specifications.
- Assessment: demonstration of skills, safety compliance.

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 **8 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 23,000.00	R 23,000.00
1	In-House	R 29,900.00	R 29,900.00
1	On-Campus (Pretoria)	R 34,500.00	R 34,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Mauritius
17 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	21 Aug 2026	On-Campus	Pretoria, 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 246764) 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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