



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

Manufacturing Assembly Operational Problem Solving Training

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 116284 · NQF Level 4 · 10 Credits · 7 Days

COURSE OVERVIEW

This course equips manufacturing assembly personnel with systematic problem-solving techniques to identify, analyse, and resolve operational issues. Participants will learn to apply root cause analysis, corrective actions, and continuous improvement methods to enhance productivity and quality in assembly environments.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	116284
Accreditation	SAQA Accredited · NQF Level 4 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply structured problem-solving methodologies (e.g., PDCA, DMAIC) to manufacturing assembly issues.
- Analyse operational problems using root cause analysis tools such as fishbone diagrams and 5 Whys.
- Evaluate potential solutions and select appropriate corrective actions based on impact and feasibility.
- Implement corrective actions and monitor their effectiveness in the assembly process.
- Demonstrate effective communication and teamwork during problem-solving activities.

WHO SHOULD ATTEND

- This training is designed for assembly line operators, team leaders, production supervisors, and quality assurance staff involved in manufacturing assembly operations.

COURSE OUTLINE

Day 1: Introduction to Problem Solving in Manufacturing Assembly

- Overview of manufacturing assembly processes.
- Common assembly defects and inefficiencies.
- Introduction to the PDCA (Plan-Do-Check-Act) cycle.
- Roles and responsibilities of team members.
- Safety and quality considerations.
- Introduction to root cause analysis concepts.
- Documentation basics for problem solving.

Day 2: Problem Identification and Data Collection

- Problem definition techniques (5W2H).
- Data collection planning.
- Check sheets, tally charts, and data logs.
- Sampling methods in assembly.
- Visual management for problem spotting.
- Pareto analysis for prioritisation.
- Introduction to process mapping (SIPOC).

Day 3: Root Cause Analysis Tools

- Fishbone (Ishikawa) diagrams.
- 5 Whys method.
- Combining 5 Whys with fishbone.
- Validation of root causes through data.
- Scatter plots and stratification.
- Case studies: assembly line defects.
- Group exercise: root cause analysis on a real scenario.

Day 4: Generating and Selecting Solutions

- Brainstorming and nominal group technique.
- Solution evaluation criteria.
- Decision matrix (Pugh matrix).
- Cost-benefit analysis.
- Risk assessment for solutions.
- Implementation planning (action plans).
- Mistake-proofing (Poka-Yoke) concepts.

Day 5: Implementing and Verifying Solutions

- Implementation steps and communication.
- Run charts and control charts for verification.
- Before-and-after comparisons.
- Standardisation of new processes.
- Updating work instructions.
- Handling implementation challenges.
- Verification report writing.

Day 6: Advanced Problem Solving and Team Facilitation

- Failure Mode and Effects Analysis (FMEA).
- Fault Tree Analysis (FTA).
- Team facilitation techniques.
- Communication and conflict resolution.
- Linking problem solving to Kaizen and Lean.
- Case study: complex assembly issue.
- Role-play: facilitating a problem-solving session.

Day 7: Practical Integration and Assessment

- Recap of all tools and processes.
- Practical project: solve a simulated assembly problem.
- Presentation of project results.
- Peer and facilitator feedback.
- Final written assessment.
- Portfolio of evidence compilation.
- Course evaluation and certification.

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 **10 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 28,200.00	R 28,200.00
1	In-House	R 36,700.00	R 36,700.00
1	On-Campus (Pretoria)	R 42,300.00	R 42,300.00

UPCOMING SESSIONS

Start	End	Method	Venue
05 Aug 2026	13 Aug 2026	On-Campus	Cape Town, South Africa
06 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
07 Aug 2026	17 Aug 2026	On-Campus	Pretoria, South Africa
07 Aug 2026	17 Aug 2026	On-Campus	Lagos, Nigeria
10 Aug 2026	18 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	18 Aug 2026	On-Campus	Mauritius
11 Aug 2026	19 Aug 2026	On-Campus	Cape Town, South Africa
12 Aug 2026	20 Aug 2026	On-Campus	Dubai, 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 116284) 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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