



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

COURSE BROCHURE

Operate Vessel Machinery Fittings And Equipment Training

Services / Transport, Operations and Logistics

Unit Standard 113982 · NQF Level 3 · 10 Credits · 7 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills to safely and efficiently operate vessel machinery fittings and equipment in a maritime or marine engineering environment. It covers pre-operational checks, start-up, monitoring, shutdown, and emergency procedures, ensuring compliance with industry standards and safety regulations.

Category	Services
Subfield	Transport, Operations and Logistics
Unit Standard	113982
Accreditation	SAQA Accredited · NQF Level 3 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate pre-operational checks and start-up procedures for vessel machinery fittings and equipment.
- Monitor and adjust machinery parameters to maintain safe and efficient operation.
- Apply emergency shutdown procedures and respond to abnormal operating conditions.
- Evaluate performance data to identify potential faults and recommend corrective actions.
- Implement maintenance schedules and record operational data in accordance with company procedures.

WHO SHOULD ATTEND

- Marine engineers, deck officers, and technical crew members responsible for operating vessel machinery and equipment on commercial ships, offshore platforms, or in port operations.

COURSE OUTLINE

Day 1: Introduction to Vessel Machinery and Safety

- Overview of vessel machinery systems (propulsion, auxiliary, deck).
- Role of a fitter and relevant legislation (OHSA, SAMSA).
- Personal and workplace safety: PPE, lock-out/tag-out, fire safety.
- Introduction to tools: hand tools, power tools, measuring instruments.
- Basic engineering drawings and symbols.
- Hazard identification and risk assessment (HIRA).

Day 2: Fittings and Valves

- Types of fittings: flanges, couplings, elbows, tees, reducers.
- Valve types: gate, globe, ball, butterfly, check, relief valves.
- Valve materials and pressure ratings.
- Gaskets, packings, and sealing compounds.
- Threaded and welded connections.
- Pipe supports and hangers.
- Practical: Inspecting and identifying fittings and valves.

Day 3: Pumps and Pumping Systems

- Pump types: centrifugal, gear, screw, diaphragm, reciprocating.
- Pump components: impellers, casings, seals, bearings.
- Pump performance curves and cavitation.
- Installation and alignment of pumps.
- Maintenance: lubrication, packing replacement, seal inspection.
- Troubleshooting: low flow, noise, vibration, leaks.
- Practical: Dismantling and reassembling a centrifugal pump.

Day 4: Piping Systems and Hydraulics

- Piping materials: steel, copper, plastic, rubber hoses.
- Pipe sizing, schedules, and colour coding.
- Hydraulic systems: pumps, cylinders, motors, control valves.
- Pipe bending and threading.
- Flanged and compression joints.
- Pressure testing and leak detection.
- Practical: Fabricating a simple pipe assembly.

Day 5: Deck Machinery and Ancillary Equipment

- Winches, windlasses, capstans: components and drives.
- Cranes and davits: load charts, safety devices.
- Mooring and towing fittings.
- Steering gear: ram-type, rotary vane.
- Compressed air systems: compressors, dryers, receivers.
- Refrigeration and HVAC basics.
- Rigging hardware: shackles, slings, hooks.
- Practical: Inspecting and operating a deck winch.

Day 6: Maintenance, Troubleshooting, and Repairs

- Preventive vs. corrective maintenance.
- Lubrication systems and schedules.
- Bearing types, fitting, and replacement.
- Seal replacement: mechanical seals, gland packings.
- Alignment techniques: laser, dial indicator.
- Vibration analysis and thermography basics.
- Maintenance logs and work orders.
- Practical: Replacing a valve and testing.

Day 7: Integration, Assessment, and Final Practical

- System integration: engine room, deck, auxiliary.
- Emergency procedures: fire, flooding, machinery failure.
- Review of key concepts and Q&A;
- Written assessment.
- Final practical task: overhaul a pump or valve assembly.
- Feedback 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 3**.

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
10 Aug 2026	18 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	19 Aug 2026	On-Campus	Durban, South Africa
11 Aug 2026	19 Aug 2026	On-Campus	Mauritius
12 Aug 2026	20 Aug 2026	On-Campus	Cape Town, South Africa
13 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
14 Aug 2026	24 Aug 2026	On-Campus	Pretoria, South Africa
17 Aug 2026	25 Aug 2026	On-Campus	Durban, South Africa
18 Aug 2026	26 Aug 2026	On-Campus	Shenzhen, China

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 113982) 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