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

LOPA

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0402 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to apply the Layer of Protection Analysis (LOPA) methodology in process safety and risk assessment. It enables participants to identify, evaluate, and manage risks by determining the adequacy of existing safeguards and proposing additional layers of protection where needed.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0402
Accreditation	SAQA Accredited · NQF Level 5 · 4 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply the LOPA methodology to assess risk in process systems.
- Analyze initiating events and independent protection layers (IPLs) to determine risk reduction.
- Evaluate the effectiveness of existing safeguards and identify gaps in protection.
- Design LOPA scenarios and calculate risk reduction factors.
- Implement LOPA findings to recommend additional protection layers.
- Demonstrate the ability to document LOPA studies and communicate results effectively.

WHO SHOULD ATTEND

- This course is designed for process safety engineers, risk assessors, HSE professionals, and technical personnel involved in hazard identification and risk management in industries such as chemical, petrochemical, oil and gas, and manufacturing.

COURSE OUTLINE

Day 1: LOPA Fundamentals and Scenario Development

- Introduction to LOPA: origins, relationship to other risk assessment methods (HAZOP, QRA
- LOPA methodology overview: steps and documentation requirements
- Identifying scenarios: using HAZOP outputs and other sources
- Initiating events and their frequencies
- Independent Protection Layers (IPLs): definition, characteristics, and common examples
- Enabling conditions and conditional modifiers
- Risk tolerance criteria and risk matrix
- Calculating risk and determining required risk reduction

Day 2: Advanced LOPA Applications and Case Studies

- Advanced IPL evaluation: human factors, passive vs. active systems, and credit limitations
- Treatment of common cause failures and dependency
- Handling of multiple initiating events and scenario aggregation
- LOPA for non-process hazards (e.g., fire, explosion, toxic release
- Documentation and reporting standards
- Case studies from South African industry (e.g., petrochemical, mining
- Integration with SIS lifecycle and safety requirements specification
- LOPA in the context of regulatory compliance and risk management frameworks

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 **4 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,900.00	**R 11,900.00**
1	In-House	R 16,100.00	**R 16,100.00**
1	On-Campus (Pretoria)	R 17,800.00	**R 17,800.00**

UPCOMING SESSIONS

Start	End	Method	Venue
01 Dec 2026	02 Dec 2026	On-Campus	Dubai, UAE
02 Dec 2026	03 Dec 2026	On-Campus	Victoria Falls, Zimbabwe
02 Dec 2026	03 Dec 2026	On-Campus	Cape Town, South Africa
03 Dec 2026	04 Dec 2026	On-Campus	Shenzhen, China
03 Dec 2026	04 Dec 2026	On-Campus	Lagos, Nigeria
09 Dec 2026	10 Dec 2026	On-Campus	Maseru, Lesotho
09 Dec 2026	10 Dec 2026	On-Campus	Kigali, Rwanda
09 Dec 2026	10 Dec 2026	On-Campus	Accra, Ghana

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard AATICD-0402) and click **Get A Quotation**. 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