



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

API 580 Risk-Based Inspection

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0420 · NQF Level 5 · 6 Credits · 3 Days

COURSE OVERVIEW

This course provides comprehensive training in API 580 Risk-Based Inspection (RBI) methodology, enabling delegates to develop and implement RBI programs that optimise inspection resources while ensuring asset integrity and safety. Participants will gain the skills to assess and manage risk in pressure equipment and piping systems, aligning with international best practices and regulatory requirements.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0420
Accreditation	SAQA Accredited · NQF Level 5 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply the API 580 methodology to identify and assess risks associated with pressure equipment and piping systems.
- Analyze inspection data and failure modes to determine appropriate inspection intervals and methods.
- Evaluate the effectiveness of existing inspection programs and identify opportunities for optimization.
- Design a risk-based inspection plan that balances safety, reliability, and cost efficiency.
- Implement RBI processes within an asset integrity management framework, ensuring compliance with relevant regulations and standards.
- Demonstrate the ability to communicate RBI results and recommendations to stakeholders effectively.

WHO SHOULD ATTEND

- This course is designed for inspection engineers, maintenance managers, reliability engineers, and technical personnel responsible for the integrity and safety of pressure equipment in the oil, gas, petrochemical, and chemical industries.

COURSE OUTLINE

Day 1: Fundamentals of Risk-Based Inspection

- Introduction to RBI and its benefits
- Overview of API 580 and related standards (API 570, API 510)
- Key definitions: risk, likelihood, consequence, and risk matrix
- Types of degradation mechanisms and failure modes
- Data requirements for RBI analysis
- Overview of the RBI process (planning, data collection, risk assessment, inspection planning)
- Roles and responsibilities of personnel in RBI
- Regulatory and safety implications of RBI

Day 2: Risk Assessment and Inspection Planning

- Likelihood of failure: degradation mechanisms, damage rates, and probability
- Consequence of failure: safety, environmental, and economic impacts
- Risk calculation and risk matrix development
- Inspection effectiveness and its impact on risk
- Establishing inspection intervals based on risk
- Developing inspection plans (methods, scope, frequency)
- Documentation and record-keeping requirements
- Case studies illustrating RBI application

Day 3: Implementation, Management, and Continuous Improvement

- Implementation steps: gap analysis, resource allocation, and training
- Integration with reliability-centered maintenance and asset integrity management
- Managing RBI within a management of change system
- Review cycles and updating risk assessments
- Performance monitoring and key performance indicators
- Common pitfalls and best practices
- Regulatory and industry expectations
- Preparation tips for API 580 certification exam

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 **6 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 13,900.00	R 13,900.00
1	In-House	R 18,100.00	R 18,100.00
1	On-Campus (Pretoria)	R 20,800.00	R 20,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
05 Oct 2026	07 Oct 2026	On-Campus	Nairobi, Kenya
05 Oct 2026	07 Oct 2026	On-Campus	Lusaka, Zambia
06 Oct 2026	08 Oct 2026	On-Campus	Kigali, Rwanda
06 Oct 2026	08 Oct 2026	On-Campus	Windhoek, Namibia
06 Oct 2026	08 Oct 2026	On-Campus	Bangkok, Thailand
07 Oct 2026	09 Oct 2026	On-Campus	Mbabane, Eswatini
07 Oct 2026	09 Oct 2026	Online	—
12 Oct 2026	14 Oct 2026	In-House	—

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 AATICD-0420) 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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