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

Time Connect And Initiate A Blast Of A Development End Using Elctric Electronic Delay Detonators Training

Manufacturing, Engineering and Technology / Fabrication and Extraction

Unit Standard 119117 · NQF Level 3 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the skills to safely and effectively time, connect, and initiate a blast in a development end using electric electronic delay detonators. It covers the principles of blast design, timing sequences, and the safe handling of detonators to ensure controlled and efficient blasting operations in mining and civil engineering environments.

Category	Manufacturing, Engineering and Technology
Subfield	Fabrication and Extraction
Unit Standard	119117
Accreditation	SAQA Accredited · NQF Level 3 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply the principles of electric electronic delay detonators to design a blast timing sequence for a development end.
- Demonstrate the correct procedure for connecting detonators in a blast circuit, ensuring continuity and safety.
- Evaluate the blast design parameters to optimize fragmentation and minimize overbreak.
- Implement safety protocols for handling, storing, and transporting electric electronic delay detonators.
- Analyze potential hazards and risks associated with blasting operations and apply control measures.
- Initiate a blast using an approved firing system and verify post-blast conditions.

WHO SHOULD ATTEND

- This course is designed for blasting practitioners, mine workers, and supervisors involved in development end blasting operations who require certification in the use of electric electronic delay detonators.

COURSE OUTLINE

Day 1: **Fundamentals of Blasting Operations and Electronic Delay Detonators**

- Overview of relevant legislation (MHSA, Explosives Act) and SAQA unit standard requirements.
- Introduction to electric electronic delay detonators: structure, delay times, and firing characteristics.
- Principles of time connect: series, parallel, and series-parallel circuits.
- Blast design basics for development ends: burden, spacing, and stemming.
- Safety protocols: handling, storage, and transportation of explosives.
- Personal protective equipment (PPE) and emergency procedures.
- Practical exercise: identifying detonator types and testing continuity.
- Pre-blast inspection and documentation requirements.

Day 2: **Blast Initiation Systems and Practical Application**

- Detailed study of delay timing: surface vs in-hole delays, timing intervals.
- Circuit design calculations: total resistance, current requirements, and voltage drop.
- Practical workshop: connecting detonators in a simulated development end.
- Use of blasting machines: operation, calibration, and safety checks.
- Fault-finding in circuits: troubleshooting open and short circuits.
- Risk assessment and job safety analysis for blasting operations.
- Environmental considerations: vibration, airblast, and flyrock control.
- Practical exercise: simulating a blast sequence with electronic detonators.

Day 3: **Advanced Applications, Integration, and Assessment**

- Advanced blast design: multi-row blasts, perimeter control, and presplitting.
- Integration with non-electric and electronic initiation systems.
- Misfire management: identification, procedures, and reporting.
- Post-blast procedures: inspection, scaling, and ventilation requirements.
- Blast performance analysis: fragmentation assessment and optimization.
- Review of case studies and incident analysis.
- Practical assessment: planning and executing a simulated blast.
- Written and oral assessment covering theory and practical application.

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 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 13,200.00	**R 13,200.00**
1	In-House	R 17,800.00	**R 17,800.00**
1	On-Campus (Pretoria)	R 19,800.00	**R 19,800.00**

UPCOMING SESSIONS

Start	End	Method	Venue
07 Dec 2026	09 Dec 2026	Online	—
07 Dec 2026	09 Dec 2026	On-Campus	Bangkok, Thailand
07 Dec 2026	09 Dec 2026	On-Campus	Blantyre, Malawi
07 Dec 2026	09 Dec 2026	On-Campus	Nairobi, Kenya
07 Dec 2026	09 Dec 2026	On-Campus	Kinshasa, DRC
07 Dec 2026	09 Dec 2026	On-Campus	Johannesburg, South Africa
07 Dec 2026	09 Dec 2026	On-Campus	Abu Dhabi, UAE
07 Dec 2026	09 Dec 2026	On-Campus	Victoria Falls, Zimbabwe

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 119117) 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.

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