



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

Install Under Surface Wireways And Draw In Conductors Training

Physical Planning and Construction / Electrical Infrastructure Construction

Unit Standard 119834 · NQF Level 1 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the skills and knowledge required to install under surface wireways and draw in conductors safely and in compliance with South African electrical regulations. Participants will gain practical competence in preparing, installing, and testing wireways for electrical installations in industrial and commercial settings.

Category	Physical Planning and Construction
Subfield	Electrical Infrastructure Construction
Unit Standard	119834
Accreditation	SAQA Accredited · NQF Level 1 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Plan and prepare for the installation of under surface wireways in accordance with specifications and safety standards.
- Install under surface wireways, including cutting, joining, and securing components, to ensure structural integrity and compliance.
- Draw in conductors using appropriate tools and techniques to prevent damage and ensure correct routing.
- Test and verify the installed wireways and conductors for continuity, insulation resistance, and compliance with regulations.
- Apply relevant health, safety, and environmental procedures throughout the installation process.
- Document and report installation activities and test results according to organizational and legal requirements.

WHO SHOULD ATTEND

- This course is designed for electricians, electrical contractors, and maintenance personnel who need to install under surface wireways and draw in conductors as part of electrical reticulation or distribution systems.

COURSE OUTLINE

Day 1: Introduction to Undersurface Wireways and Safety

- Overview of undersurface wireways: definition, applications, and benefits.
- Types of wireways: metallic, non-metallic, and hybrid systems.
- Relevant legislation and standards: OHSA, SANS 10142-1, and SAQA unit standards.
- Safety protocols: lockout/tagout, working in confined spaces, and electrical safety.
- PPE selection and inspection for wireway installation.
- Hazard identification and risk assessment (HIRA) for installation sites.
- Introduction to tools and equipment for wireway installation.

Day 2: Planning and Preparation for Wireway Installation

- Reading and interpreting electrical installation diagrams and site plans.
- Selection criteria for wireway materials: corrosion resistance, load capacity, and ingress protection.
- Components: straight sections, elbows, tees, couplings, and supports.
- Cable pulling considerations: bend radius, fill ratio, and pulling tension.
- Material take-off and procurement procedures.
- Site survey and measurement techniques.
- Coordination with structural, plumbing, and other services.
- Documentation: work permits, method statements, and inspection checklists.

Day 3: Installation of Undersurface Wireways

- Support systems: clamps, brackets, trapeze hangers, and concrete inserts.
- Assembly techniques: joining sections, using couplings, and tightening fasteners.
- Installing bends and fittings: field-fabricated vs. factory-made.
- Achieving correct alignment: use of levels, string lines, and laser tools.
- Sealing methods: gaskets, compounds, and firestop systems.
- Bonding and grounding of metallic wireways.
- Inspection criteria: alignment, support spacing, and clearance requirements.
- Common installation defects and corrective actions.

Day 4: Drawing in Conductors and Cable Management

- Conductor preparation: cutting, stripping, and attaching pulling devices.
- Pulling methods: manual pulling, winches, and cable rollers.
- Lubrication types and application for reduced friction.
- Bend radius compliance: measuring and maintaining during pulls.
- Pulling tension monitoring: dynamometers and breakaway links.
- Troubleshooting: dealing with stuck cables, sharp edges, and jammed sections.
- Cable securing: straps, ties, and supports within wireways.
- Identification systems: labels, markers, and colour coding for circuits.

Day 5: Termination, Testing, and Commissioning

- Termination techniques: stripping, crimping, and screw connections.
- Installation of outlets, junction boxes, and termination enclosures.
- Testing instruments: multimeters, meggers, and continuity testers.
- Insulation resistance testing: procedure and acceptable values.
- Polarity and phase sequence verification.
- As-built drawings and record keeping.

- Commissioning checklist and sign-off procedures.
- Safety during testing: de-energization and isolation verification.

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 **8 NQF credits** at **NQF Level 1**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 23,000.00	R 23,000.00
1	In-House	R 29,900.00	R 29,900.00
1	On-Campus (Pretoria)	R 34,500.00	R 34,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Mauritius
17 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	21 Aug 2026	On-Campus	Pretoria, South Africa

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 119834) 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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