



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

Earthworks Fundamentals For Construction And Civil Engineering Training

Physical Planning and Construction / Civil Engineering Construction

Unit Standard 116051 · NQF Level 2 · 5 Credits · 2 Days

COURSE OVERVIEW

This course provides foundational knowledge and practical skills for earthworks operations in construction and civil engineering. It covers excavation, compaction, and safety procedures to ensure compliance with South African standards.

Category	Physical Planning and Construction
Subfield	Civil Engineering Construction
Unit Standard	116051
Accreditation	SAQA Accredited · NQF Level 2 · 5 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply principles of earthworks including excavation, filling, and compaction according to project specifications.
- Demonstrate safe work practices and compliance with relevant health and safety regulations on earthworks sites.
- Analyze soil types and their properties to determine appropriate earthworks methods.
- Implement compaction testing procedures to ensure specified density requirements are met.
- Evaluate earthworks equipment and select suitable machinery for specific tasks.
- Design basic earthworks sequences to optimize efficiency and safety.

WHO SHOULD ATTEND

- This course is designed for construction workers, site supervisors, and civil engineering technicians who are involved in earthworks activities and seek to enhance their technical competence.

COURSE OUTLINE

Day 1: Principles of Earthworks and Site Preparation

- Introduction to earthworks: scope, terminology, and importance.
- Site assessment: geotechnical investigations, soil types, and classification.
- Clearing and grubbing: removal of vegetation and topsoil.
- Cut and fill operations: balancing earth volumes.
- Compaction principles: density, moisture content, and testing methods.
- Equipment for earthworks: dozers, graders, rollers, and excavators.
- Safety considerations on earthworks sites.
- Environmental controls: erosion and sediment management.

Day 2: Practical Application and Quality Control

- Practical demonstration: soil compaction testing (e.g., sand cone, nuclear gauge).
- Quality control: field density tests, moisture content checks, and reporting.
- Earthworks specifications: reading and interpreting contract documents.
- Case studies: common earthworks problems and solutions.
- Integration with other civil engineering activities (e.g., foundations, drainage).
- Earthworks planning: cut-fill calculations and site layout.
- Health, safety, and environment (HSE) in earthworks operations.
- Assessment and review: practical exercise and feedback.

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 **5 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 15,400.00	R 15,400.00
1	In-House	R 20,000.00	R 20,000.00
1	On-Campus (Pretoria)	R 23,100.00	R 23,100.00

UPCOMING SESSIONS

Start	End	Method	Venue
03 Aug 2026	04 Aug 2026	On-Campus	Dubai, UAE
03 Aug 2026	04 Aug 2026	On-Campus	Mauritius
03 Aug 2026	04 Aug 2026	On-Campus	Lagos, Nigeria
05 Aug 2026	06 Aug 2026	On-Campus	Pretoria, South Africa
05 Aug 2026	06 Aug 2026	On-Campus	Cape Town, South Africa
05 Aug 2026	06 Aug 2026	On-Campus	Johannesburg, South Africa
11 Aug 2026	12 Aug 2026	On-Campus	Mauritius
11 Aug 2026	12 Aug 2026	On-Campus	Dubai, UAE

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 116051) 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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