



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

Soil And Gravel Sampling For Laboratory Testing Training

Physical Planning and Construction / Civil Engineering Construction

Unit Standard 116557 · NQF Level 3 · 12 Credits · 9 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to correctly sample soil and gravel for laboratory testing, ensuring compliance with South African standards and quality assurance protocols. It covers sampling techniques, equipment handling, and documentation to support accurate testing in construction and mining industries.

Category	Physical Planning and Construction
Subfield	Civil Engineering Construction
Unit Standard	116557
Accreditation	SAQA Accredited · NQF Level 3 · 12 Credits
Duration	9 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply appropriate sampling techniques for soil and gravel according to standard procedures.
- Demonstrate correct use and maintenance of sampling equipment and tools.
- Implement safety protocols during field sampling operations.
- Analyze sample quality and integrity to ensure representative laboratory testing.
- Document sampling data accurately for traceability and reporting purposes.
- Evaluate site conditions to determine suitable sampling locations and methods.

WHO SHOULD ATTEND

- This course is designed for technicians, field workers, and quality controllers involved in soil and gravel sampling for construction, mining, or geotechnical projects.

COURSE OUTLINE

Day 1: Introduction to Soil and Gravel Sampling

- Overview of soil and gravel in construction
- Engineering properties of soil and gravel
- Why sampling is critical for laboratory testing
- Introduction to SANS and other relevant standards
- Health and safety considerations in sampling

Day 2: Sampling Equipment and Tools

- Hand augers, bucket augers, and screw augers
- Shovels, scoops, and trowels
- Split spoon samplers and Shelby tubes
- Mechanical drilling equipment overview
- Equipment calibration and maintenance
- Personal protective equipment (PPE) for sampling

Day 3: Sampling Methods and Techniques

- Disturbed vs. undisturbed samples
- Bulk sampling for gravel and soil
- Grab sampling and composite sampling
- Auger sampling techniques
- Sampling in cohesive and non-cohesive soils
- Avoiding contamination and disturbance

Day 4: Sampling Location and Strategy

- Developing a sampling plan
- Grid, random, and stratified sampling patterns
- Sampling depth and frequency
- Considering site variability and geology
- Using GPS and surveying for location marking
- Field notes and documentation

Day 5: Sample Handling, Preservation, and Transportation

- Sample containers: bags, jars, tubes, and boxes
- Labeling and chain of custody
- Preservation for moisture content, chemical tests, and microbiological tests
- Temperature control and packaging
- Transportation safety and regulatory compliance
- Documentation for sample tracking

Day 6: Field Testing and In-Situ Measurements

- Field moisture content determination
- Pocket penetrometer and shear vane tests
- Sand cone test for in-situ density
- Nuclear density gauge (safety and use)
- Soil classification using field observations
- Relating field tests to laboratory tests

Day 7: Laboratory Testing Overview and Sample Preparation

- Overview of laboratory tests: grading, Atterberg limits, compaction, CBR, triaxial
- Sample preparation: air drying, crushing, sieving
- Sample splitting methods (riffle box, quartering)
- Moisture conditioning for compaction tests
- Laboratory request forms and communication
- Quality control in sample preparation

Day 8: Quality Assurance, Documentation, and Reporting

- QA/QC in sampling: duplicates, blanks, and control samples
- Field data sheets and electronic data capture
- Chain of custody forms
- Sampling report structure and content
- Interpreting laboratory results in context
- Non-conformance and corrective actions

Day 9: Practical Integration and Assessment

- Full-scale field sampling simulation
- Sample handling and transport to lab
- Report writing and presentation
- Written assessment (multiple choice and short answer)
- Practical skills evaluation
- Course review and Q&A; session

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 **12 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 33,300.00	R 33,300.00
1	In-House	R 43,300.00	R 43,300.00
1	On-Campus (Pretoria)	R 50,000.00	R 50,000.00

UPCOMING SESSIONS

Start	End	Method	Venue
03 Aug 2026	13 Aug 2026	On-Campus	Dubai, UAE
04 Aug 2026	14 Aug 2026	On-Campus	Pretoria, South Africa
04 Aug 2026	14 Aug 2026	On-Campus	Lagos, Nigeria
05 Aug 2026	17 Aug 2026	On-Campus	Johannesburg, South Africa
06 Aug 2026	18 Aug 2026	On-Campus	Mauritius
07 Aug 2026	19 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	20 Aug 2026	On-Campus	Pretoria, South Africa
11 Aug 2026	21 Aug 2026	On-Campus	Abu Dhabi, 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 116557) 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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