



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

Basic Concrete Construction Principles And Practice Training

Physical Planning and Construction / Civil Engineering Construction

Unit Standard 116562 · NQF Level 3 · 10 Credits · 7 Days

COURSE OVERVIEW

This course equips learners with fundamental principles and practical skills for basic concrete construction, ensuring safe and quality workmanship. It covers concrete properties, mixing, placing, curing, and testing, aligned with South African construction standards. The training aims to enhance productivity and reduce defects on construction sites.

Category	Physical Planning and Construction
Subfield	Civil Engineering Construction
Unit Standard	116562
Accreditation	SAQA Accredited · NQF Level 3 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply correct concrete mixing ratios and procedures according to specifications.
- Demonstrate proper techniques for placing and compacting concrete to avoid defects.
- Analyze factors affecting concrete strength and durability, including curing methods.
- Implement basic quality control tests such as slump and cube testing.
- Evaluate safety risks associated with concrete construction and apply preventive measures.
- Interpret construction drawings and specifications for concrete works.

WHO SHOULD ATTEND

- This course is designed for entry-level construction workers, artisans, and supervisors who require foundational knowledge of concrete construction.
- It is also suitable for individuals seeking to formalize their skills in the building industry.

COURSE OUTLINE

Day 1: Introduction to Concrete and Safety Practices

- What is concrete? Composition and types.
- Cement, aggregates, water, and admixtures.
- Safety regulations (OHS Act) and site safety.
- PPE: hard hats, boots, gloves, goggles.
- Hazard identification and risk assessment.
- Introduction to quality control: slump test, cube tests.

Day 2: Concrete Materials and Mix Design

- Cement types and storage.
- Aggregates: fine and coarse, grading, impurities.
- Water quality and admixtures.
- Mix design fundamentals: trial mixes.
- Practical: sieve analysis and moisture content test.
- Water-cement ratio and workability.
- Batching by volume vs. weight.

Day 3: Batching, Mixing, and Transporting Concrete

- Batching equipment and calibration.
- Mixing: hand mixing vs. machine mixing.
- Mixer types: drum, pan, and continuous.
- Mixing time and sequence of charging.
- Transport: wheelbarrows, skips, pumps, trucks.
- Segregation and bleeding: causes and prevention.
- Practical: batch and mix a small load.

Day 4: Placing, Compacting, and Finishing Concrete

- Placing: formwork preparation, layer thickness.
- Compaction: hand tamping, vibrators (internal and external).
- Over-vibration and under-vibration effects.
- Finishing: screeding, floating, troweling.
- Textured finishes: broom, exposed aggregate.
- Curing: importance and methods.
- Defects: honeycombing, cracking, scaling.

Day 5: Formwork and Reinforcement

- Formwork materials: timber, plywood, steel.
- Design principles: strength, rigidity, alignment.
- Formwork erection and stripping procedures.
- Reinforcement: steel bars, mesh, stirrups.
- Cutting, bending, and tying rebar.
- Cover blocks and spacers.
- Practical: assemble a simple formwork and place reinforcement.

Day 6: Quality Control and Testing of Concrete

- Fresh concrete tests: slump, compacting factor, air content.

- Hardened concrete tests: compressive strength, flexural strength.
- Cube sampling, curing, and crushing.
- Non-destructive tests: rebound hammer, ultrasonic pulse.
- Acceptance criteria and rejection.
- Record keeping and reporting.
- Practical: perform slump test and cast cubes.

Day 7: Practical Application and Assessment

- Group project: cast a concrete slab or block.
- Site preparation, formwork, reinforcement.
- Batching, mixing, placing, compaction, finishing.
- Curing and protection.
- Quality tests: slump, cube samples.
- Troubleshooting common issues.
- Written assessment (multiple choice and short questions).
- Feedback and certification.

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 **10 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 28,200.00	R 28,200.00
1	In-House	R 36,700.00	R 36,700.00
1	On-Campus (Pretoria)	R 42,300.00	R 42,300.00

UPCOMING SESSIONS

Start	End	Method	Venue
31 Jul 2026	10 Aug 2026	On-Campus	Cape Town, South Africa
31 Jul 2026	10 Aug 2026	On-Campus	Accra, Ghana
03 Aug 2026	11 Aug 2026	On-Campus	Pretoria, South Africa
03 Aug 2026	11 Aug 2026	On-Campus	Lagos, Nigeria
04 Aug 2026	12 Aug 2026	On-Campus	Johannesburg, South Africa
05 Aug 2026	13 Aug 2026	On-Campus	Mauritius
06 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
07 Aug 2026	17 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 116562) 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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