Accredited Africa Training Institute for Capacity Development
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COURSE BROCHURE

Identify Interpret And Produce Working Reinforced Concrete Detail Drawings Training

Physical Planning and Construction / Physical Planning, Design and Management

Unit Standard 120198 · NQF Level 4 · 10 Credits · 7 Days

COURSE OVERVIEW

This course equips learners with the skills to identify, interpret, and produce working reinforced concrete detail drawings in accordance with industry standards. Participants will gain practical knowledge of reinforced concrete detailing principles, enabling them to create accurate and compliant drawings for construction projects.

Category	Physical Planning and Construction
Subfield	Physical Planning, Design and Management
Unit Standard	120198
Accreditation	SAQA Accredited · NQF Level 4 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Identify and interpret key features of reinforced concrete detail drawings, including reinforcement schedules, bar bending schedules, and section details.
- Apply relevant building codes, standards (e.g., SANS 10100), and specifications to reinforced concrete detailing.
- Analyze structural drawings and specifications to determine reinforcement requirements for beams, columns, slabs, and foundations.
- Produce accurate working reinforced concrete detail drawings using CAD software and manual drafting techniques.
- Demonstrate the ability to check and verify reinforcement details for compliance with design intent and industry standards.

WHO SHOULD ATTEND

- This course is designed for architectural drafters, civil engineering technicians, junior structural engineers, and construction professionals who are involved in the preparation or interpretation of reinforced concrete detail drawings.

COURSE OUTLINE

Day 1: Introduction to Reinforced Concrete Detailing and Standards

- Overview of reinforced concrete structures: beams, columns, slabs, footings
- Introduction to SAQA unit standard 120198
- South African building regulations and SANS standards
- Drawing conventions: title blocks, scale, north point, and revision codes
- Symbols and abbreviations for reinforcement and concrete
- Line types and line weights in engineering drawings
- Basic drawing layout and document control

Day 2: Understanding Reinforcement and Material Properties

- Types of reinforcement: mild steel, high-yield, welded mesh
- Bar bending schedules: shape codes, dimensions, and quantities
- Concrete cover: nominal cover, exposure classes, and fire resistance
- Material properties: characteristic strength, modulus of elasticity
- Durability: corrosion protection, water-cement ratio, and admixtures
- Handling of reinforcement on site: storage, tying, and lap lengths

Day 3: Detailing of Slabs and Beams

- Slab types: solid, ribbed, flat plate, and waffle
- Reinforcement placement: bottom steel, top steel, distribution steel
- Beam detailing: longitudinal and shear reinforcement, stirrups
- Lap and anchorage lengths per SANS 10100-1
- Curtailment and bending of bars
- Detailing of openings and edge conditions
- Plan and section view coordination

Day 4: Detailing of Columns and Walls

- Column types: tied, spiral, composite
- Longitudinal reinforcement: number, size, and arrangement
- Transverse reinforcement: ties, spirals, and spacing
- Column splices: lap, welded, and mechanical couplers
- Wall detailing: vertical and horizontal reinforcement, temperature steel
- Shear walls: boundary elements, web reinforcement
- Retaining walls: stem, base, drainage, and joints
- Detailing of corbels and brackets

Day 5: Detailing of Foundations and Retaining Structures

- Isolated footings: pad dimensions, reinforcement, and base slab
- Combined footings: strap beams, and reinforcement detailing
- Strip footings: continuous reinforcement and starter bars
- Pile caps: layout, pile reinforcement, and cap detailing
- Raft foundations: thickenings, reinforcement arrangement
- Retaining walls: cantilever and counterfort types
- Movement joints: construction, expansion, and contraction joints
- Waterproofing details: membranes, waterstops, and drainage

Day 6: **Detailing of Stairs, Ramps, and Special Structures**

- Stair types: waist slabs, treads, and landings
- Reinforcement detailing for stairs: main and distribution steel
- Ramps: slope reinforcement and surface finish details
- Water-retaining structures: crack control, joint detailing, and waterproofing
- Precast concrete: lifting points, connection details, and tolerances
- Seismic detailing: ductile detailing, confinement zones
- Detailing for industrial structures: crane beams, bunkers

Day 7: **Project Integration, Quality Assurance, and Final Assessment**

- Integration of all components: slabs, beams, columns, walls, foundations
- Drawing compilation: general arrangement, sections, schedules, and notes
- Quality assurance: checking dimensions, bar marks, and clash detection
- Coordination with other disciplines: openings, sleeves, and embedded items
- Introduction to detailing software: AutoCAD and Revit basics
- Document control: revisions, transmittals, and filing
- Final practical assessment: produce a set of detail drawings from a given design

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 4**.

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
07 Aug 2026	17 Aug 2026	On-Campus	Johannesburg, South Africa
10 Aug 2026	18 Aug 2026	On-Campus	Cape Town, South Africa
11 Aug 2026	19 Aug 2026	On-Campus	Dubai, UAE
12 Aug 2026	20 Aug 2026	On-Campus	Pretoria, South Africa
13 Aug 2026	21 Aug 2026	On-Campus	Abu Dhabi, UAE
14 Aug 2026	24 Aug 2026	On-Campus	Durban, South Africa
14 Aug 2026	24 Aug 2026	On-Campus	Mauritius
17 Aug 2026	25 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 120198) 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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