



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

Identify Interpret And Produce Working Air Conditioning And Ventilation Duct And Plant Drawings Training

Manufacturing, Engineering and Technology / Engineering and Related Design

Unit Standard 120201 · NQF Level 4 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the skills to identify, interpret, and produce working drawings for air conditioning and ventilation duct and plant systems. Participants will gain the ability to read and understand technical drawings, apply relevant standards, and create accurate duct and plant layouts. The course ensures compliance with industry regulations and enhances workplace efficiency in HVAC projects.

Category	Manufacturing, Engineering and Technology
Subfield	Engineering and Related Design
Unit Standard	120201
Accreditation	SAQA Accredited · NQF Level 4 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Identify and interpret symbols, abbreviations, and conventions used in air conditioning and ventilation duct and plant drawings.
- Apply relevant South African standards and regulations to the production of working drawings.
- Produce accurate duct and plant layout drawings using manual or CAD techniques.
- Analyze and resolve discrepancies between drawings and site conditions.
- Demonstrate the ability to read and extract information from schematic and detailed drawings.
- Implement quality control checks to ensure drawing accuracy and compliance.

WHO SHOULD ATTEND

- This course is designed for HVAC technicians, draftsmen, engineers, and supervisors involved in the design, installation, or maintenance of air conditioning and ventilation systems.
- It is also suitable for individuals seeking to upskill in technical drawing interpretation and production within the built environment.

COURSE OUTLINE

Day 1: Foundational Drawing Interpretation and HVAC Systems

- Overview of HVAC systems: ventilation, air conditioning, and ducting components.
- Types of drawings: floor plans, elevations, sections, and isometric views.
- Standard symbols, line types, and abbreviations per SANS 0143.
- Reading title blocks, revision blocks, and drawing scales.
- Orthographic projection: first-angle vs third-angle.
- Interpreting simple duct layouts and plant room schematics.
- Coordination with architectural and structural drawings.
- Introduction to relevant SAQA unit standard 120201 outcomes.

Day 2: Producing and Modifying HVAC Duct and Plant Drawings

- Manual drafting techniques: line work, lettering, and layout.
- Introduction to CAD software for HVAC drafting (e.g., AutoCAD MEP).
- Creating ductwork plans: single-line and double-line representations.
- Dimensioning: linear, angular, and coordinate dimensions.
- Adding annotations, notes, and schedules.
- Drawing modification: scaling, layering, and revision control.
- Extracting quantities: duct lengths, fittings, and plant equipment.
- Quality checks: verifying accuracy against design criteria.

Day 3: Advanced Applications and Integration of HVAC Drawings

- Reading control diagrams: damper actuators, thermostats, and sensors.
- Wiring and schematic diagrams for plant controls.
- Clash detection: integrating HVAC with plumbing, fire, and electrical services.
- Producing a project set: floor plan, sections, details, and schedules.
- Problem-solving: identifying and correcting errors in drawings.
- Simulated site review: applying changes from site instructions.
- Presentation of final drawing set to peers for feedback.
- Assessment against unit standard 120201 criteria.

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 **6 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 17,900.00	R 17,900.00
1	In-House	R 23,300.00	R 23,300.00
1	On-Campus (Pretoria)	R 26,800.00	R 26,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
22 Jun 2026	24 Jun 2026	On-Campus	Mombasa, Kenya
22 Jun 2026	24 Jun 2026	On-Campus	Maseru, Lesotho
23 Jun 2026	25 Jun 2026	On-Campus	Nairobi, Kenya
23 Jun 2026	25 Jun 2026	On-Campus	Windhoek, Namibia
24 Jun 2026	26 Jun 2026	On-Campus	Mbabane, Eswatini
24 Jun 2026	26 Jun 2026	In-House	–
29 Jun 2026	01 Jul 2026	On-Campus	Luanda, Angola
29 Jun 2026	01 Jul 2026	On-Campus	Nairobi, Kenya

Contact us if no suitable date is listed – on-demand sessions can be arranged for groups.

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