



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aaticd.co.za · Website: www.aaticd.co.za

COURSE BROCHURE

Demonstrate Knowledge Of Psychrometric Charts And Perform Calculations Training

Health Sciences and Social Services / Preventive Health

Unit Standard 120328 · NQF Level 3 · 5 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the ability to read, interpret, and apply psychrometric charts for accurate calculations in HVAC and environmental control systems. Participants will gain practical skills to determine air properties, analyze thermal comfort conditions, and optimize energy efficiency in building services.

Category	Health Sciences and Social Services
Subfield	Preventive Health
Unit Standard	120328
Accreditation	SAQA Accredited · NQF Level 3 · 5 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Interpret psychrometric charts to identify air properties such as dry-bulb temperature, wet-bulb temperature, relative humidity, and dew point.
- Apply psychrometric calculations to determine sensible and latent heat loads in air conditioning processes.
- Analyze air mixing, heating, cooling, humidification, and dehumidification processes using psychrometric charts.
- Evaluate the impact of psychrometric conditions on human thermal comfort and indoor air quality.
- Demonstrate accurate plotting of air state points and process lines on psychrometric charts.
- Perform calculations for mass flow rate, enthalpy, and moisture content in air handling systems.

WHO SHOULD ATTEND

- This course is designed for HVAC technicians, engineers, facilities managers, and technical professionals involved in air conditioning, refrigeration, or ventilation system design, installation, and maintenance.

COURSE OUTLINE

Day 1: Fundamentals of Psychrometrics and Chart Interpretation

- Introduction to psychrometry and moist air properties.
- Understanding the psychrometric chart: axes, saturation curve, constant property lines.
- Determining air properties from given data (dry-bulb + wet-bulb, dry-bulb + relative humidity, etc.).
- Concept of sensible heat ratio and plotting air processes (heating, cooling, humidification, dehumidification).
- Practical exercises: reading chart values and calculating enthalpy differences.
- Overview of unit conversions and typical South African climatic conditions.

Day 2: Advanced Calculations and Practical Applications

- Mixing of air streams: graphical and algebraic methods.
- Cooling and dehumidification: coil bypass factor, apparatus dew point, and load calculations.
- Heating and humidification: steam and water spray humidifier performance.
- Adiabatic saturation and evaporative cooling principles.
- Psychrometric analysis of typical air conditioning cycles (e.g., all-air systems).
- Practical workshop: solving real-world problems and verifying results with chart.
- Unit standard assessment: perform calculations and chart interpretations under supervision.

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 3**.

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
10 Aug 2026	11 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	11 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	11 Aug 2026	On-Campus	Mauritius
12 Aug 2026	13 Aug 2026	On-Campus	Cape Town, South Africa
12 Aug 2026	13 Aug 2026	On-Campus	Pretoria, South Africa
12 Aug 2026	13 Aug 2026	On-Campus	Durban, South Africa
18 Aug 2026	19 Aug 2026	On-Campus	Shenzhen, China
18 Aug 2026	19 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 120328) 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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