



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@aatikd.co.za · Website: www.aatikd.co.za

COURSE BROCHURE

Electric Vehicle Energy Management

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0548 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course equips participants with the knowledge and skills to effectively manage electric vehicle (EV) energy systems, including charging infrastructure, battery management, and energy optimization. It focuses on practical strategies for reducing operational costs, enhancing efficiency, and supporting sustainable transport solutions in the South African context.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0548
Accreditation	SAQA Accredited · NQF Level 5 · 4 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply principles of EV energy management to optimize charging schedules and reduce peak demand.
- Analyze battery performance data to extend battery life and improve energy efficiency.
- Evaluate different charging technologies and select appropriate solutions for various operational contexts.
- Design an EV energy management plan that integrates renewable energy sources and grid constraints.
- Implement monitoring and control systems to track energy usage and identify improvement opportunities.
- Demonstrate compliance with relevant South African regulations and safety standards in EV energy management.

WHO SHOULD ATTEND

- This course is ideal for fleet managers, energy consultants, facilities managers, and technicians involved in the operation or maintenance of electric vehicles and their charging infrastructure.

COURSE OUTLINE

Day 1: Fundamentals of Electric Vehicle Energy Systems

- Overview of EV types and energy storage options
- Battery fundamentals: chemistry, voltage, capacity, and C-rates
- EV powertrain components: inverter, motor, and regenerative braking
- Charging infrastructure: AC/DC charging, connectors, and standards (IEC, CCS, CHAdeMO)
- Energy efficiency: energy consumption, range, and efficiency calculations
- Introduction to Battery Management Systems (BMS): functions and importance

Day 2: Advanced Energy Management and Practical Applications

- Energy management strategies: eco-driving, predictive energy optimisation, and thermal management
- Battery degradation and lifecycle management
- Smart charging: load balancing, time-of-use tariffs, and vehicle-to-grid (V2G)
- Data analytics for energy monitoring: telematics and fleet management
- Integration of solar PV and storage with EV charging
- Regulatory framework and standards for EV energy management in South Africa

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 **4 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,900.00	R 11,900.00
1	In-House	R 15,400.00	R 15,400.00
1	On-Campus (Pretoria)	R 17,800.00	R 17,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
30 Sep 2026	01 Oct 2026	On-Campus	Blantyre, Malawi
01 Oct 2026	02 Oct 2026	On-Campus	Mombasa, Kenya
01 Oct 2026	02 Oct 2026	On-Campus	London, UK
05 Oct 2026	06 Oct 2026	On-Campus	Kigali, Rwanda
05 Oct 2026	06 Oct 2026	Online	—
06 Oct 2026	07 Oct 2026	On-Campus	Mbabane, Eswatini
06 Oct 2026	07 Oct 2026	On-Campus	Lusaka, Zambia
07 Oct 2026	08 Oct 2026	On-Campus	Bangkok, Thailand

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 AATICD-0548) 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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