



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

Electric Vehicles and Charging Infrastructure

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0546 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course provides participants with a comprehensive understanding of electric vehicles (EVs) and the associated charging infrastructure. It covers the technology, types of EVs, charging standards, installation considerations, and maintenance practices, enabling participants to make informed decisions and contribute to the adoption of sustainable transport.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0546
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 knowledge of EV types, components, and battery technologies to select appropriate vehicles for specific applications.
- Analyze charging standards, connectors, and communication protocols to recommend suitable charging solutions.
- Evaluate site requirements and electrical infrastructure for the safe and efficient installation of charging stations.
- Design basic charging infrastructure layouts, considering load management, renewable integration, and user needs.
- Implement maintenance and safety procedures for EV charging equipment and vehicles.
- Demonstrate an understanding of regulatory frameworks, incentives, and environmental impacts related to EVs in South Africa.

WHO SHOULD ATTEND

- This course is designed for fleet managers, automotive technicians, facilities managers, energy consultants, and professionals involved in the rollout or management of EV charging infrastructure in South Africa.

COURSE OUTLINE

Day 1: EV Fundamentals and Charging Technologies

- Introduction to EVs: history, market trends, and policy landscape in South Africa
- EV types: battery electric (BEV), plug-in hybrid (PHEV), hybrid (HEV)
- Core EV components: battery packs, electric motors, power electronics, thermal management
- Charging fundamentals: AC vs DC, charging levels (Mode 1-4), power ratings
- Connector standards: Type 2, CCS, CHAdeMO, and GB/T relevance
- Battery basics: lithium-ion chemistries, capacity, state of charge, degradation
- Charging curves and factors affecting charge time
- Overview of charging standards and safety regulations (SANS, IEC)

Day 2: Charging Infrastructure Deployment and Integration

- Site selection and installation planning for charging stations
- Electrical requirements: grid capacity, transformers, protection devices
- Load management and demand response in multi-charger installations
- Smart charging: communication protocols (OCPP), energy management systems
- Vehicle-to-grid (V2G) and future trends
- Maintenance, troubleshooting, and safety practices for charging infrastructure
- Regulatory framework and municipal approvals in South Africa
- Business models and funding options for charging networks

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	Maseru, Lesotho
30 Sep 2026	01 Oct 2026	On-Campus	Victoria Falls, Zimbabwe
01 Oct 2026	02 Oct 2026	In-House	—
01 Oct 2026	02 Oct 2026	On-Campus	Shenzhen, China
05 Oct 2026	06 Oct 2026	On-Campus	Nairobi, Kenya
05 Oct 2026	06 Oct 2026	On-Campus	Bangkok, Thailand
06 Oct 2026	07 Oct 2026	On-Campus	Windhoek, Namibia
07 Oct 2026	08 Oct 2026	Online	—

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-0546) 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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