



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

Transport Systems Impact on External Environment

Services / Transport, Operations and Logistics

Unit Standard 244244 · NQF Level 5 · 10 Credits · 7 Days

COURSE OVERVIEW

This course provides learners with a comprehensive understanding of how transport systems interact with and influence their external environment. It explores the economic, social, and environmental impacts of transportation, enabling learners to assess and mitigate negative effects while optimizing positive contributions.

Category	Services
Subfield	Transport, Operations and Logistics
Unit Standard	244244
Accreditation	SAQA Accredited · NQF Level 5 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Analyze the economic impact of transport systems on regional and national development.
- Evaluate the social effects of transport infrastructure on communities, including accessibility and equity.
- Assess the environmental consequences of transport operations, such as emissions and land use.
- Apply regulatory frameworks and policies governing transport externalities in South Africa.
- Design strategies to mitigate negative environmental impacts while enhancing economic benefits.
- Demonstrate the ability to report on transport system impacts using relevant metrics.

WHO SHOULD ATTEND

- This course is designed for transport managers, logistics professionals, planners, and policy advisors who need to understand the broader implications of transport operations.
- It is also suitable for environmental officers and sustainability coordinators in the transport sector.

COURSE OUTLINE

Day 1: Introduction to Transport Systems and Environmental Concepts

- Overview of transport modes (road, rail, air, maritime).
- Components of transport systems.
- Definition and scope of external environment.
- Types of environmental impacts: air, noise, water, land.
- Introduction to South African environmental legislation (NEMA, NEM:AQA).
- Role of transport in sustainable development.

Day 2: Air Quality and Emissions from Transport

- Major air pollutants: CO, NO_x, PM, VOCs, SO_x.
- Health impacts: respiratory diseases, cancer.
- Environmental effects: smog, acid rain, climate change.
- Emission standards: Euro norms, South African standards.
- Control technologies: catalytic converters, particulate filters.
- Emission factor calculation exercise.

Day 3: Noise and Vibration Impacts

- Sources: road traffic, rail, aircraft.
- Noise measurement units (dB) and human perception.
- Health effects: hearing loss, sleep disturbance.
- Vibration impacts on structures and humans.
- Mitigation: barriers, low-noise surfaces, building insulation.
- Noise mapping and assessment techniques.

Day 4: Water and Land Impacts

- Surface water pollution from runoff, spills.
- Groundwater contamination risks.
- Land take and habitat loss.
- Fragmentation of ecosystems and wildlife corridors.
- Soil compaction and erosion.
- Mitigation: swales, retention ponds, green infrastructure.

Day 5: Climate Change and Energy Use

- Greenhouse gases from transport: CO₂, CH₄, N₂O.
- Global warming potential and climate feedbacks.
- Energy consumption by mode: MJ per passenger-km.
- Alternative fuels: biofuels, electricity, hydrogen.
- Electric vehicles and charging infrastructure.
- Carbon footprint calculation methods.

Day 6: Environmental Impact Assessment (EIA) for Transport Projects

- Legal framework: NEMA, EIA regulations 2014.
- Screening, scoping, and impact assessment phases.
- Public participation and stakeholder engagement.
- Mitigation hierarchy and offsets.
- Case study: road expansion project EIA.

- Practical: drafting an impact statement.

Day 7: Integrated Environmental Management and Best Practices

- Sustainable transport principles: avoid-shift-improve.
- Integrated transport and land-use planning.
- Green logistics and fleet management.
- Environmental management systems (EMS).
- Case studies: BRT systems, non-motorised transport.
- Course review and assessment.

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 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 29,600.00	R 29,600.00
1	In-House	R 38,500.00	R 38,500.00
1	On-Campus (Pretoria)	R 44,400.00	R 44,400.00

UPCOMING SESSIONS

Start	End	Method	Venue
05 Aug 2026	13 Aug 2026	On-Campus	Johannesburg, South Africa
06 Aug 2026	14 Aug 2026	On-Campus	Mauritius
07 Aug 2026	17 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	18 Aug 2026	On-Campus	Pretoria, South Africa
11 Aug 2026	19 Aug 2026	On-Campus	Abu Dhabi, UAE
12 Aug 2026	20 Aug 2026	On-Campus	Durban, South Africa
12 Aug 2026	20 Aug 2026	On-Campus	Mauritius
13 Aug 2026	21 Aug 2026	On-Campus	Cape Town, South Africa

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 244244) 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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