



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

Matrices and Graphs for Problem Solving

Physical, Mathematical, Computer and Life Sciences / Mathematical Sciences

Unit Standard 243838 · NQF Level 3 · 2 Credits · 1 Day

COURSE OVERVIEW

This course equips learners with the skills to use matrices and graphs as tools for organising information and solving practical problems. Participants will learn to represent data, model relationships, and apply mathematical techniques to analyse and interpret complex scenarios. The course bridges theoretical concepts with real-world applications in business and technology.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Mathematical Sciences
Unit Standard	243838
Accreditation	SAQA Accredited · NQF Level 3 · 2 Credits
Duration	1 day
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply matrix operations to organise and manipulate data sets.
- Analyse relationships using graph theory to model and solve problems.
- Evaluate the suitability of matrices or graphs for given problem contexts.
- Design matrix and graph representations for real-world information.
- Implement solutions using matrices and graphs to address organisational challenges.

WHO SHOULD ATTEND

- This course is designed for professionals, analysts, and managers who need to organise and interpret data to support decision-making.
- It is also suitable for learners seeking foundational skills in applied mathematics for problem-solving.

COURSE OUTLINE

Day 1: Matrices and Graphs for Problem Solving

- Introduction to matrices: definitions, types, and basic operations
- Matrix multiplication and its applications
- Representing systems of linear equations with matrices
- Introduction to graphs: vertices, edges, and adjacency matrices
- Using adjacency matrices to model networks
- Solving problems with matrix operations on graphs (e.g., path finding)
- Case studies: routing, resource allocation, and social 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 **2 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 12,800.00	R 12,800.00
1	In-House	R 16,600.00	R 16,600.00
1	On-Campus (Pretoria)	R 19,200.00	R 19,200.00

UPCOMING SESSIONS

Start	End	Method	Venue
05 Aug 2026	05 Aug 2026	On-Campus	Cape Town, South Africa
05 Aug 2026	05 Aug 2026	On-Campus	Lagos, Nigeria
06 Aug 2026	06 Aug 2026	On-Campus	Dubai, UAE
06 Aug 2026	06 Aug 2026	On-Campus	Johannesburg, South Africa
07 Aug 2026	07 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	10 Aug 2026	On-Campus	Durban, South Africa
11 Aug 2026	11 Aug 2026	On-Campus	Dubai, UAE
13 Aug 2026	13 Aug 2026	On-Campus	Pretoria, 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 243838) 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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