



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

Solving Equations and Inequalities in Complex Number Systems

Physical, Mathematical, Computer and Life Sciences / Mathematical Sciences

Unit Standard 243827 · NQF Level 3 · 4 Credits · 1 Day

COURSE OVERVIEW

This course equips learners with the skills to solve equations and inequalities in both real and complex number systems using algebraic and graphical methods. Participants will develop a deep understanding of complex numbers, including operations, representation, and applications, enabling them to tackle advanced mathematical problems in engineering, science, and technology.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Mathematical Sciences
Unit Standard	243827
Accreditation	SAQA Accredited · NQF Level 3 · 4 Credits
Duration	1 day
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply algebraic methods to solve linear, quadratic, and polynomial equations in the real number system.
- Analyze and solve inequalities using algebraic and graphical techniques, including interval notation and number line representation.
- Perform operations with complex numbers (addition, subtraction, multiplication, division) and represent them in Cartesian and polar forms.
- Solve quadratic equations with complex roots and demonstrate the relationship between roots and coefficients.
- Evaluate and graph complex functions, including the use of Argand diagrams.
- Design solutions to real-world problems involving equations and inequalities in complex number systems.

WHO SHOULD ATTEND

- This course is designed for professionals and students in engineering, physics, computer science, and related fields who need to apply complex number theory to solve equations and inequalities.
- It is also suitable for educators seeking to enhance their mathematical teaching repertoire.

COURSE OUTLINE

Day 1: Solving Equations and Inequalities in Complex Number Systems

- Introduction to complex numbers: definition, real and imaginary parts
- Arithmetic operations with complex numbers: addition, subtraction, multiplication, division
- Complex conjugate and modulus
- Solving linear equations in complex numbers
- Solving quadratic equations with complex roots
- Inequalities involving complex numbers: modulus inequalities
- Graphical representation of complex numbers on the Argand diagram
- Applications of complex numbers in engineering and physics

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 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	Mauritius
06 Aug 2026	06 Aug 2026	On-Campus	Cape Town, South Africa
07 Aug 2026	07 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	10 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	11 Aug 2026	On-Campus	Durban, South Africa
11 Aug 2026	11 Aug 2026	On-Campus	Mauritius
12 Aug 2026	12 Aug 2026	On-Campus	Cape Town, South Africa
13 Aug 2026	13 Aug 2026	On-Campus	Dubai, 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 243827) 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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