



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

Describe Interpret And Represent Mathematical Patterns Functions And Algebra In Different Contexts Training

Physical, Mathematical, Computer and Life Sciences / Mathematical Sciences

Unit Standard 119368 · NQF Level 1 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the skills to describe, interpret, and represent mathematical patterns, functions, and algebra in various contexts. It enables participants to apply algebraic thinking to solve real-world problems, analyse relationships between variables, and communicate mathematical ideas effectively.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Mathematical Sciences
Unit Standard	119368
Accreditation	SAQA Accredited · NQF Level 1 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Describe and explain the characteristics of mathematical patterns, relationships, and functions in different contexts.
- Interpret and represent functions using tables, graphs, formulas, and words.
- Apply algebraic techniques to solve problems involving patterns and functions.
- Analyse the relationship between variables and predict outcomes using mathematical models.
- Evaluate the appropriateness of different representations for given contexts.
- Demonstrate the use of algebraic notation and conventions in solving problems.

WHO SHOULD ATTEND

- This course is designed for individuals seeking to improve their mathematical literacy for workplace or further study, including administrative staff, technicians, and supervisors who need to interpret data and patterns in their daily tasks.

COURSE OUTLINE

Day 1: Foundational Concepts of Patterns, Functions, and Algebra

- Introduction to patterns in real-life contexts (e.g., growth of plants, savings).
- Arithmetic and geometric sequences: definitions and examples.
- Representing patterns: tables, ordered pairs, graphs.
- Functions: domain, range, and function notation $f(x)$.
- Linear functions: slope, intercepts, and graphical representation.
- Quadratic functions: simple examples and parabolas.
- Basic algebra: simplifying expressions, substitution, and solving linear equations.
- Practical exercises using patterns in workplace scenarios.

Day 2: Algebraic Representations and Problem Solving

- Translating word problems into algebraic equations.
- Solving linear equations: balancing method, transposition.
- Solving quadratic equations: factorisation, quadratic formula.
- Graphing linear functions: slope-intercept form, plotting points.
- Graphing quadratic functions: vertex, intercepts, symmetry.
- Inequalities: solving and representing on number lines.
- Systems of linear equations: graphical and algebraic solutions.
- Application problems: budgeting, resource allocation, trend analysis.

Day 3: Advanced Applications, Modelling, and Integration

- Exponential functions: growth and decay in finance (interest, depreciation).
- Modelling: fitting functions to data sets (linear regression basics).
- Interpreting graphs: trends, turning points, and rates of change.
- Financial applications: compound interest, annuities.
- Scientific contexts: distance-time, speed-time graphs.
- Workplace scenarios: production rates, cost analysis.
- Problem-solving with multiple representations (tables, graphs, equations).
- Review and assessment: comprehensive case study applying all concepts.

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 **6 NQF credits** at **NQF Level 1**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 17,900.00	R 17,900.00
1	In-House	R 23,300.00	R 23,300.00
1	On-Campus (Pretoria)	R 26,800.00	R 26,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
03 Aug 2026	05 Aug 2026	On-Campus	Dubai, UAE
03 Aug 2026	05 Aug 2026	On-Campus	Johannesburg, South Africa
04 Aug 2026	06 Aug 2026	On-Campus	Pretoria, South Africa
04 Aug 2026	06 Aug 2026	On-Campus	Mauritius
05 Aug 2026	07 Aug 2026	On-Campus	Cape Town, South Africa
05 Aug 2026	07 Aug 2026	On-Campus	Lagos, Nigeria
10 Aug 2026	12 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	12 Aug 2026	On-Campus	Mauritius

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 119368) 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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