



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aaticd.co.za · Website: www.aaticd.co.za

COURSE BROCHURE

Understanding Forensic Biology Evidence Value

Law, Military Science and Security / Safety in Society

Unit Standard 242710 · NQF Level 5 · 12 Credits · 9 Days

COURSE OVERVIEW

This course equips learners with the knowledge to assess the evidential value of forensic biology evidence in criminal investigations. It covers the collection, preservation, and analysis of biological samples, and their role in the justice system. By the end, learners will understand how to evaluate the integrity and significance of forensic biology evidence.

Category	Law, Military Science and Security
Subfield	Safety in Society
Unit Standard	242710
Accreditation	SAQA Accredited · NQF Level 5 · 12 Credits
Duration	9 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate an understanding of the principles and types of forensic biology evidence.
- Evaluate the evidential value of biological samples in the context of a criminal investigation.
- Apply appropriate methods for the collection, preservation, and packaging of biological evidence.
- Analyze the chain of custody and its impact on the admissibility of forensic biology evidence.
- Assess the potential for contamination and degradation of biological evidence and its effects on evidential value.
- Explain the role of forensic biology evidence in linking suspects, victims, and crime scenes.

WHO SHOULD ATTEND

- This course is designed for forensic investigators, crime scene technicians, law enforcement officers, and legal professionals who need to understand the value and limitations of forensic biology evidence.

COURSE OUTLINE

Day 1: Introduction to Forensic Biology and Evidence Value

- Overview of forensic biology
- What is evidence value? Factors affecting value
- Types of biological evidence: blood, semen, saliva, hair, tissue
- Chain of custody: principles and documentation
- Legal context: SAQA, SAPS, and forensic standards

Day 2: Biological Evidence Collection and Preservation

- Collection methods for different evidence types
- Preservation: drying, refrigeration, chemical stabilizers
- Contamination control: PPE, sterile tools, and techniques
- Documentation: forms, photographs, and notes
- Packaging: paper bags, envelopes, and containers

Day 3: DNA Structure, Function, and Analysis Principles

- DNA structure: double helix, nucleotides, and loci
- Forensic DNA profiling: STRs and multiplex PCR
- DNA extraction methods: organic, silica, and magnetic beads
- Quantification and amplification (PCR)
- Interpretation of profiles: homozygotes, heterozygotes, mixtures
- DNA databases: NDIS, NFDD, and ethical considerations

Day 4: Serology and Body Fluid Identification

- Presumptive tests: Kastle-Meyer, Luminol, Acid Phosphatase, Amylase
- Confirmatory tests: RSID, microscopy, and immunological assays
- Serological screening protocols
- Result interpretation: false positives/negatives
- Evidence triage: prioritizing samples for DNA analysis

Day 5: Trace Biological Evidence and Non-Human DNA

- Touch DNA: collection via swabs and tape lifts
- Hair analysis: microscopic examination and mitochondrial DNA
- Forensic botany: pollen, plant fragments
- Forensic entomology: insect life cycles and PMI estimation
- Non-human DNA databases and case examples

Day 6: Statistical Interpretation and Population Genetics

- Hardy-Weinberg equilibrium and allele frequencies
- Random match probability: product rule and correction factors
- Likelihood ratios: principles and calculation
- Mixture interpretation: allele counting, peak height ratios
- Statistical reporting: verbal scales and courtroom presentation

Day 7: Quality Assurance and Laboratory Standards

- QA/QC: controls, audits, and corrective actions
- ISO 17025: key requirements for forensic labs
- Validation of methods: developmental and internal

- Contamination prevention and monitoring
- Ethics: objectivity, confidentiality, and expert testimony

Day 8: Case Studies and Courtroom Testimony

- Case study 1: Sexual assault and DNA evidence
- Case study 2: Homicide and trace evidence
- Case study 3: Cold cases and DNA databases
- Courtroom testimony: direct and cross-examination techniques
- Admissibility: legal standards and challenges

Day 9: Integration, Review, and Assessment

- Integration exercise: evaluating evidence from a mock scene
- Written assessment: multiple choice and short answer
- Future trends: rapid DNA, next-generation sequencing, AI
- Professional development and continuing education
- Course review and feedback session

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 **12 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 35,000.00	R 35,000.00
1	In-House	R 45,500.00	R 45,500.00
1	On-Campus (Pretoria)	R 52,500.00	R 52,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	20 Aug 2026	On-Campus	Cape Town, South Africa
11 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
12 Aug 2026	24 Aug 2026	On-Campus	Pretoria, South Africa
13 Aug 2026	25 Aug 2026	On-Campus	Abu Dhabi, UAE
14 Aug 2026	26 Aug 2026	On-Campus	Durban, South Africa
14 Aug 2026	26 Aug 2026	On-Campus	Mauritius
17 Aug 2026	27 Aug 2026	On-Campus	Harare, Zimbabwe
17 Aug 2026	27 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 242710) 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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