



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@aatikd.co.za · Website: www.aatikd.co.za

COURSE BROCHURE

Histopathology Biological Specimen Processing

Health Sciences and Social Services / Curative Health

Unit Standard 257198 · NQF Level 3 · 13 Credits · 10 Days

COURSE OVERVIEW

This course equips laboratory professionals with the knowledge and skills to safely handle, process, and store biological specimens in a histopathology laboratory. It covers the entire workflow from specimen reception to preparation for analysis, ensuring compliance with quality standards and safety protocols. Learners will gain confidence in performing routine histopathology procedures while minimizing risks to themselves and others.

Category	Health Sciences and Social Services
Subfield	Curative Health
Unit Standard	257198
Accreditation	SAQA Accredited · NQF Level 3 · 13 Credits
Duration	10 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply correct procedures for receiving, labelling, and registering biological specimens in a histopathology laboratory.
- Demonstrate safe handling, fixation, and processing of tissue specimens according to standard operating procedures.
- Implement quality control measures to ensure specimen integrity and traceability throughout the processing workflow.
- Analyze potential hazards associated with biological specimen handling and apply appropriate safety precautions.
- Evaluate different processing techniques and select the appropriate method for various tissue types.
- Maintain accurate records and documentation in compliance with laboratory and regulatory requirements.

WHO SHOULD ATTEND

- This course is designed for laboratory technicians, technologists, and assistants working in histopathology or anatomical pathology laboratories.
- It is also suitable for healthcare professionals seeking to expand their skills in specimen processing.

COURSE OUTLINE

Day 1: Introduction to Histopathology and Specimen Processing

- Overview of histopathology laboratory.
- Types of biological specimens (biopsies, resections, cytology).
- Specimen collection, labelling, and transport.
- Chain of custody and documentation.
- Laboratory safety: PPE, chemical hazards, waste disposal.
- Introduction to quality assurance and standard operating procedures (SOPs).

Day 2: Specimen Reception and Macroscopic Examination

- Specimen reception: verification, registration, and coding.
- Macroscopic examination: measurement, colour, consistency.
- Orientation and inking of surgical margins.
- Fixation: purpose, types of fixatives (formalin, Bouin's).
- Fixation time and penetration factors.
- Decalcification: when and how.

Day 3: Tissue Processing – Dehydration, Clearing, and Infiltration

- Overview of automated tissue processors.
- Dehydration: ethanol series, isopropanol.
- Clearing: xylene, limonene-based agents.
- Infiltration: paraffin wax, vacuum infiltration.
- Processing schedules for different tissue types.
- Troubleshooting common processing artifacts.

Day 4: Embedding and Microtomy

- Embedding: moulds, cassettes, orientation.
- Embedding for special tissues (skin, bone, small biopsies).
- Microtome types and components.
- Sectioning technique: block trimming, cutting, ribbons.
- Section thickness and knife angles.
- Common artifacts: chatter, compression, tears.

Day 5: Routine Staining – Haematoxylin and Eosin (H&E;)

- Theory of H&E;: nuclear and cytoplasmic staining.
- Haematoxylin types (Mayer's, Harris, Gill's).
- Eosin variants and counterstaining.
- H&E; staining protocol: deparaffinisation, hydration, staining, dehydration.
- Coverslipping: manual and automated.
- Quality control: nuclear detail, contrast, clarity.

Day 6: Special Stains – Histochemistry

- Overview of histochemical stains.
- Periodic Acid-Schiff (PAS): for glycogen, mucins.
- Masson's Trichrome: collagen and muscle.
- Reticulin stain: reticulin fibres.
- Special stain protocols and controls.

- Troubleshooting and quality assurance.

Day 7: Immunohistochemistry (IHC) – Principles and Practice

- IHC theory: antigen-antibody reaction.
- Direct vs indirect methods.
- Antigen retrieval: heat-induced (HIER) and enzymatic.
- Detection systems: DAB, AP, polymer-based.
- Negative and positive controls.
- IHC troubleshooting: background, weak signal.

Day 8: Frozen Section Technique and Cytology Preparation

- Indications for frozen sections.
- Cryostat operation and maintenance.
- Frozen section cutting and staining.
- Artifacts and limitations of frozen sections.
- Cytology specimen types: fine needle aspirates, fluids.
- Cytopreparation: smears, cytocentrifugation, liquid-based.

Day 9: Advanced Techniques and Digital Pathology

- In situ hybridisation: FISH, CISH.
- PCR-based molecular pathology.
- Digital pathology: scanning, storage, image analysis.
- Laboratory accreditation: ISO 15189, SANAS.
- Internal and external quality audits.
- Troubleshooting complex processing issues.

Day 10: Integration, Review, and Assessment

- Review of entire workflow from reception to staining.
- Case studies: challenging specimens.
- Mock practical assessment.
- Quality assurance documentation.
- Career pathways and continuing education.
- Final written and practical 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 **13 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 26,300.00	R 26,300.00
1	In-House	R 34,200.00	R 34,200.00
1	On-Campus (Pretoria)	R 39,400.00	R 39,400.00

UPCOMING SESSIONS

Start	End	Method	Venue
21 Aug 2026	03 Sep 2026	On-Campus	Pretoria, South Africa
24 Aug 2026	04 Sep 2026	On-Campus	Durban, South Africa
25 Aug 2026	07 Sep 2026	On-Campus	Shenzhen, China
26 Aug 2026	08 Sep 2026	On-Campus	Harare, Zimbabwe
27 Aug 2026	09 Sep 2026	On-Campus	Bangkok, Thailand
28 Aug 2026	10 Sep 2026	On-Campus	Victoria Falls, Zimbabwe
28 Aug 2026	10 Sep 2026	On-Campus	Abu Dhabi, UAE
31 Aug 2026	11 Sep 2026	On-Campus	Shenzhen, China

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 257198) 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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