



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

Demonstrate An Understanding Of Microbiological Principles And Its Application In A Food Handling Environment Training

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 119801 · NQF Level 5 · 12 Credits · 9 Days

COURSE OVERVIEW

This course equips food handlers with a foundational understanding of microbiological principles and their practical application in food handling environments. Participants will learn to identify microbiological hazards, understand conditions that promote microbial growth, and apply control measures to ensure food safety and prevent contamination.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	119801
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 basic microbiological concepts and their relevance to food safety.
- Identify the types of microorganisms that can cause food spoilage and foodborne illnesses.
- Apply principles of microbial growth and control to prevent contamination in food handling.
- Evaluate conditions that promote microbial growth and implement appropriate preventive measures.
- Implement hygiene and sanitation practices that minimize microbiological risks in a food handling environment.

COURSE OUTLINE

Day 1: Introduction to Microbiology and Food Safety

- Overview of microbiology in food industry
- Types of microorganisms: bacteria, viruses, fungi, parasites
- Food spoilage vs. foodborne pathogens
- Conditions for microbial growth: temperature, pH, moisture, nutrients
- Introduction to food safety regulations in South Africa

Day 2: Bacteria and Their Role in Food

- Bacterial cell structure and classification
- Reproduction methods: binary fission, spore formation
- Common foodborne bacteria: Salmonella, E. coli, Listeria, Staphylococcus
- Bacterial growth phases and generation time
- Factors influencing bacterial growth in food

Day 3: Viruses, Parasites, and Fungi in Food

- Foodborne viruses: Norovirus, Hepatitis A
- Parasites: Trichinella, Toxoplasma, Giardia
- Moulds and yeasts: spoilage and mycotoxins
- Sources and transmission in food handling
- Prevention: hygiene, cooking, and storage

Day 4: Principles of Food Spoilage

- Types of spoilage: microbial, chemical, physical
- Enzymatic reactions and oxidation
- Spoilage of meat, dairy, vegetables, grains
- Spoilage indicators: odour, texture, colour
- Shelf life and factors extending it

Day 5: Foodborne Illness and Outbreak Investigation

- Food infection vs. intoxication examples
- Major foodborne illnesses: symptoms and incubation
- High-risk foods and vulnerable groups
- Steps in outbreak investigation
- Role of health authorities and recall systems

Day 6: Control of Microorganisms: Temperature and Time

- Temperature danger zone (5°C–60°C)
- Pasteurisation, sterilisation, and cooking temperatures
- Cooling, chilling, and freezing effects on microbes
- Time-temperature abuse and monitoring
- HACCP critical control points for temperature

Day 7: Control of Microorganisms: Chemical and Physical Methods

- Chemical preservatives: salt, sugar, acids, nitrites
- Physical methods: dehydration, irradiation, UV light
- Water activity and pH as control factors
- Cleaning vs. sanitising vs. sterilising

- Approved sanitisers and application methods

Day 8: HACCP and Microbiological Criteria

- HACCP principles overview
- Hazard analysis for biological hazards
- Setting critical limits for microbes
- Microbiological criteria: pathogens, indicator organisms
- Sampling plans and testing methods

Day 9: Practical Application and Integration

- Scenario-based exercises: risk assessment
- Designing a food safety plan (HACCP-based)
- Case studies: prevention and corrective actions
- Review of key principles and regulations
- Summative assessment and feedback

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
03 Aug 2026	13 Aug 2026	On-Campus	Johannesburg, South Africa
04 Aug 2026	14 Aug 2026	On-Campus	Mauritius
05 Aug 2026	17 Aug 2026	On-Campus	Cape Town, South Africa
06 Aug 2026	18 Aug 2026	On-Campus	Dubai, UAE
07 Aug 2026	19 Aug 2026	On-Campus	Pretoria, South Africa
07 Aug 2026	19 Aug 2026	On-Campus	Lagos, Nigeria
10 Aug 2026	20 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	20 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 119801) 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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