



## 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

# Wine and Spirits Wood Maturation Techniques

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 259161 · NQF Level 3 · 8 Credits · 5 Days

## COURSE OVERVIEW

This course equips learners with the knowledge and skills to perform wood maturation of wine or spirits, including selecting appropriate oak types, managing barrel aging processes, and evaluating the impact on product quality. Participants will understand the chemical interactions between wood and beverage, and apply best practices to achieve desired sensory characteristics.

|                 |                                           |
|-----------------|-------------------------------------------|
| Category        | Manufacturing, Engineering and Technology |
| Subfield        | Manufacturing and Assembly                |
| Unit Standard   | 259161                                    |
| Accreditation   | SAQA Accredited · NQF Level 3 · 8 Credits |
| Duration        | 5 days                                    |
| Training Method | Online, On-Campus, In-House               |
| Certificate     | Issued via AATICD LMS – verifiable online |

## LEARNING OUTCOMES

- Apply principles of wood selection and barrel preparation for wine or spirits maturation.
- Analyze the chemical and sensory changes during wood maturation.
- Evaluate the influence of oak type, toast level, and age on the final product.
- Implement monitoring and quality control procedures throughout the maturation process.
- Demonstrate proper handling, filling, topping, and storage of barrels.
- Design a maturation plan that aligns with product style and market requirements.

## WHO SHOULD ATTEND

- This course is ideal for cellar workers, production supervisors, quality control staff, and small-scale distillers or winemakers seeking to deepen their practical understanding of wood maturation techniques.

## COURSE OUTLINE

### Day 1: Introduction to Wood Maturation and Oak Chemistry

- History and importance of barrel ageing
- Anatomy of oak wood: heartwood, sapwood, grain
- Key oak compounds: lactones, tannins, vanillin, lignin
- Oxygen transfer and micro-oxygenation
- Oak species: *Quercus petraea*, *Quercus robur*, American white oak
- Toasting and charring processes
- Barrel sizes and surface-to-volume ratio
- Introduction to alternative maturation vessels

### Day 2: Cooperage Techniques and Barrel Construction

- Stave selection and grain orientation
- Air drying vs. kiln drying
- Raising and bending staves
- Toasting levels: light, medium, heavy
- Charring for spirits
- Barrel assembly and hooping
- Barrel volume and shape variations
- Reuse cycles and regeneration techniques

### Day 3: Chemical and Sensory Changes During Maturation

- Extraction of phenolics and flavour compounds
- Oxidation reactions: acetaldehyde, colour stabilisation
- Evaporation and angel's share
- Influence of temperature and humidity
- Sensory evaluation techniques for matured products
- Flavour wheels for oak maturation
- Spirit maturation: new vs. used barrels
- Wine maturation: barrel fermentation vs. ageing

### Day 4: Alternative Maturation Techniques and Innovations

- Alternative woods: acacia, cherry, chestnut
- Oak alternatives: chips, staves, cubes, powders
- Micro-oxygenation systems
- Barrel alternatives for spirits: stainless steel with oak inserts
- Accelerated maturation techniques
- Sustainability in forestry and cooperage
- Regulatory considerations for alternative methods
- Case studies of innovative maturation programmes

### Day 5: Quality Control, Blending, and Practical Application

- Barrel inventory and tracking systems
- Sampling and analysis protocols
- Blending techniques for wine and spirits
- Fault identification: *brettanomyces*, volatile acidity, cork taint
- Corrective actions: fining, filtration, re-racking

- Cost analysis of barrel programmes
- Regulatory labelling requirements
- Final project: designing a maturation plan

## 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 **8 NQF credits** at **NQF Level 3**.

## PRICING (PER DELEGATE, EX-VAT)

| Delegates | Training Method      | Price per Delegate | Total       |
|-----------|----------------------|--------------------|-------------|
| 1         | Online               | R 23,000.00        | R 23,000.00 |
| 1         | In-House             | R 29,900.00        | R 29,900.00 |
| 1         | On-Campus (Pretoria) | R 34,500.00        | R 34,500.00 |

## UPCOMING SESSIONS

| Start       | End         | Method    | Venue                   |
|-------------|-------------|-----------|-------------------------|
| 10 Aug 2026 | 14 Aug 2026 | On-Campus | Durban, South Africa    |
| 10 Aug 2026 | 14 Aug 2026 | On-Campus | Abu Dhabi, UAE          |
| 10 Aug 2026 | 14 Aug 2026 | On-Campus | Pretoria, South Africa  |
| 10 Aug 2026 | 14 Aug 2026 | On-Campus | Dubai, UAE              |
| 10 Aug 2026 | 14 Aug 2026 | On-Campus | Cape Town, South Africa |
| 10 Aug 2026 | 14 Aug 2026 | On-Campus | Mauritius               |
| 17 Aug 2026 | 21 Aug 2026 | On-Campus | Dubai, UAE              |
| 17 Aug 2026 | 21 Aug 2026 | On-Campus | Pretoria, South Africa  |

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](http://www.aaticd.co.za), open the page for this course (Unit Standard 259161) 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](mailto: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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