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 259203 · NQF Level 3 · 8 Credits · 5 Days

## COURSE OVERVIEW

This course provides comprehensive training on the techniques and principles of wood maturation for wines and spirits. Learners will gain the practical skills and theoretical knowledge required to manage the maturation process, ensuring product quality and consistency.

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|---|---|
| Category | Manufacturing, Engineering and Technology |
| Subfield | Manufacturing and Assembly |
| Unit Standard | 259203 |
| 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 wood maturation techniques to enhance wine and spirit characteristics.
- Monitor and control maturation conditions to achieve desired product profiles.
- Evaluate the impact of different wood types and treatments on flavor and aroma.
- Implement quality assurance procedures during the maturation process.
- Analyze sensory changes in wine and spirits during maturation.

## WHO SHOULD ATTEND

- This course is designed for cellar workers, production supervisors, and quality assurance personnel in the wine and spirits industry who are responsible for or involved in the maturation process.

## COURSE OUTLINE

### Day 1: Introduction to Wood Maturation

- History and significance of wood maturation.
- Wood species: oak (American, French, Eastern European), chestnut, acacia.
- Barrel construction: staves, heads, hoops, and toasting/charring.
- Chemical components in wood: lignin, cellulose, hemicellulose, tannins.
- Impact of toasting levels (light, medium, heavy) and charring.
- Alternative maturation: staves, chips, spirals, and inner staves.
- Legal definitions and regulations for wood ageing in South Africa.
- Overview of flavour compounds imparted by wood.

### Day 2: Chemistry of Wood-Wine/Spirit Interactions

- Extraction mechanisms: diffusion, solubility, and time.
- Oxygen transmission rates (OTR) and micro-oxygenation.
- Impact of barrel size, thickness, and age on oxygen ingress.
- Key compounds: vanillin, oak lactones, eugenol, guaiacol, tannins.
- Colour development: anthocyanin-tannin polymerisation.
- Texture and mouthfeel: astringency, body, and smoothness.
- Influence of barrel history: first-fill vs. refill, seasoned vs. new.
- Interaction with other winemaking/spirit-making processes.

### Day 3: Barrel Management and Ageing Regimes

- Barrel selection criteria: wood origin, toast level, size, age.
- Filling procedures: ullage management and topping schedules.
- Barrel hall design: temperature, humidity, ventilation.
- Monitoring ageing: sensory and chemical analysis.
- Barrel cleaning and reconditioning: hot water, steam, SO2.
- Sulphuring barrels to prevent microbial spoilage.
- Brettanomyces and other spoilage organisms: detection and control.
- Volatile acidity and oxidative faults: causes and prevention.

### Day 4: Advanced Techniques and Experimental Approaches

- Alternative woods: cherry, mulberry, ash, and their flavour profiles.
- Use of wood chips, staves, and powders in bulk ageing.
- Hybrid systems: barrel and tank combinations.
- Experimental design: controlled trials for wood type, toast, time.
- Sensory evaluation: descriptive analysis, triangle tests, and scoring.
- Product-specific maturation: whisky (new charred oak), brandy (used oak), wine (neutral vs. new).
- Sustainability in cooperage: barrel recycling, alternative species.
- Emerging trends: robotic barrel management, smart sensors.

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

- Quality control: chemical analysis (GC-MS, spectrophotometry), sensory benchmarks.
- Blending: combining barrels to achieve desired flavour, colour, and texture.
- Cost analysis: barrel purchase, maintenance, storage, and loss (angel's share).
- Maturation plan development: from grape/raw spirit to bottling.
- Regulatory compliance: labelling requirements for wood ageing claims.

- Case studies: successful wood maturation programs in South Africa.
- Final project: design a maturation protocol for a given product.
- Presentation and peer review of maturation strategies.

## 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 16,900.00 | **R 16,900.00** |
| 1 | In-House | R 22,800.00 | **R 22,800.00** |
| 1 | On-Campus (Pretoria) | R 25,400.00 | **R 25,400.00** |

## UPCOMING SESSIONS

| Start | End | Method | Venue |
|---|---|---|---|
| 07 Dec 2026 | 11 Dec 2026 | Online | — |
| 07 Dec 2026 | 11 Dec 2026 | On-Campus | Bangkok, Thailand |
| 07 Dec 2026 | 11 Dec 2026 | On-Campus | Blantyre, Malawi |
| 07 Dec 2026 | 11 Dec 2026 | On-Campus | Nairobi, Kenya |
| 07 Dec 2026 | 11 Dec 2026 | On-Campus | Kinshasa, DRC |
| 07 Dec 2026 | 11 Dec 2026 | On-Campus | Johannesburg, South Africa |
| 07 Dec 2026 | 11 Dec 2026 | On-Campus | Abu Dhabi, UAE |
| 07 Dec 2026 | 11 Dec 2026 | On-Campus | Victoria Falls, Zimbabwe |

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

## HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 259203) and click **Get A Quotation**. 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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