



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

Pulp and Paper Manufacturing Processes Overview

Manufacturing, Engineering and Technology / Engineering and Related Design

Unit Standard 256236 · NQF Level 2 · 10 Credits · 7 Days

COURSE OVERVIEW

This course provides a comprehensive overview of the pulp and paper manufacturing processes, from raw material handling to finished product. Participants will gain an understanding of the key stages, equipment, and quality control measures involved in modern pulp and paper production, enabling them to contribute effectively to operational efficiency and product quality.

Category	Manufacturing, Engineering and Technology
Subfield	Engineering and Related Design
Unit Standard	256236
Accreditation	SAQA Accredited · NQF Level 2 · 10 Credits
Duration	7 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate an understanding of the raw materials used in pulp and paper manufacturing, including wood species and recycled fiber sources.
- Explain the key steps in mechanical, chemical, and semi-chemical pulping processes.
- Describe the papermaking process, including stock preparation, forming, pressing, drying, and finishing.
- Analyze the environmental and quality control considerations in pulp and paper production.
- Apply knowledge of process variables to optimize production efficiency and product quality.

WHO SHOULD ATTEND

- This course is designed for production supervisors, process technicians, quality assurance personnel, and other professionals working in or entering the pulp and paper industry who need a foundational understanding of manufacturing processes.

COURSE OUTLINE

Day 1: Introduction to Pulp and Paper Industry

- Overview of the pulp and paper industry in South Africa and globally.
- Key players and market segments.
- Raw materials: softwood, hardwood, recycled paper, and non-wood fibres.
- Wood anatomy and fibre properties.
- Environmental impact and sustainability principles.
- Introduction to the papermaking process flow.

Day 2: Raw Material Preparation and Pulping Processes

- Woodyard operations: debarking, chipping, and screening.
- Mechanical pulping: groundwood and refiner mechanical pulping.
- Chemical pulping: kraft and sulfite processes.
- Semi-chemical and chemi-mechanical pulping.
- Pulping chemistry: cooking liquor, reactions, and yield.
- Chemical recovery cycle in kraft mills.
- Pulp washing and screening.

Day 3: Bleaching and Pulp Processing

- Objectives of bleaching: brightness, cleanliness, and strength.
- Bleaching chemicals: chlorine dioxide, oxygen, hydrogen peroxide, ozone.
- Elemental chlorine free (ECF) and totally chlorine free (TCF) sequences.
- Bleaching equipment and process control.
- Environmental aspects of bleach plant effluents.
- Pulp cleaning: centrifugal cleaning and pressure screening.
- Refining and beating: effects on fibre properties.

Day 4: Papermaking: Wet End Operations

- Stock preparation: refining, blending, and addition of additives.
- Approach flow system: cleaning, deaeration, and screening.
- Headbox types and functions: hydraulic, air-padded, and dilution control.
- Forming section: fourdrinier, twin-wire, and hybrid formers.
- Drainage elements: foils, table rolls, and vacuum boxes.
- Wet end chemistry: retention, drainage, and sizing.
- Formation and fibre orientation.

Day 5: Papermaking: Pressing, Drying, and Finishing

- Press section: roll presses, shoe presses, and felt design.
- Water removal and sheet consolidation.
- Dryer section: cylinder drying, steam systems, and condensate removal.
- Heat recovery and ventilation.
- Surface sizing and coating: equipment and formulations.
- Calendering: machine calender, supercalender, and soft nip.
- Reeling and winding.
- Finishing: slitting, sheeting, wrapping, and labeling.

Day 6: Quality Control, Testing, and Troubleshooting

- Physical properties: basis weight, caliper, moisture, and strength.
- Optical properties: brightness, opacity, and colour.
- Surface properties: roughness, porosity, and sizing.
- Standard testing methods (TAPPI, ISO).
- On-line measurement and control systems.
- Common defects: holes, wrinkles, streaks, and breaks.
- Troubleshooting approaches: cause-and-effect analysis.
- Statistical process control (SPC) basics.

Day 7: Environmental Management, Safety, and Industry Trends

- Environmental legislation in South Africa (NEMA, water use licences).
- Effluent treatment: primary, secondary, and tertiary processes.
- Air emissions control: particulate, TRS, and VOC.
- Solid waste management: sludge, bark, and ash.
- Occupational health and safety: machine guarding, chemical handling, confined spaces.
- Energy efficiency and cogeneration.
- Industry 4.0: automation, sensors, and data analytics.
- Bio-refinery concepts and sustainable packaging trends.

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 **10 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 28,200.00	R 28,200.00
1	In-House	R 36,700.00	R 36,700.00
1	On-Campus (Pretoria)	R 42,300.00	R 42,300.00

UPCOMING SESSIONS

Start	End	Method	Venue
03 Aug 2026	11 Aug 2026	On-Campus	Pretoria, South Africa
03 Aug 2026	11 Aug 2026	On-Campus	Lagos, Nigeria
04 Aug 2026	12 Aug 2026	On-Campus	Johannesburg, South Africa
05 Aug 2026	13 Aug 2026	On-Campus	Mauritius
06 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
07 Aug 2026	17 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	18 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	19 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 256236) 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.

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 · WhatsApp: +27 65 077 6310 · apply@aaticd.co.za · www.aaticd.co.za