



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

Hot Mix Asphalt Paving Machine Operation Training

Physical Planning and Construction / Civil Engineering Construction

Unit Standard 116146 · NQF Level 2 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills required to safely and efficiently operate a hot mix asphalt paving machine. It covers pre-operational checks, operating procedures, and site safety protocols in line with SAQA unit standard 116146. Successful learners will be able to prepare, operate, and maintain paving machines to produce quality asphalt surfaces.

Category	Physical Planning and Construction
Subfield	Civil Engineering Construction
Unit Standard	116146
Accreditation	SAQA Accredited · NQF Level 2 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate knowledge of the functions, components, and operating principles of a hot mix asphalt paving machine.
- Apply pre-operational checks and routine maintenance procedures to ensure machine readiness and safety.
- Operate the paving machine in accordance with manufacturer specifications and site requirements.
- Evaluate paving quality and make adjustments to achieve specified mat thickness, slope, and texture.
- Implement safety procedures and respond to operational hazards during paving operations.
- Analyze paving site conditions and communicate effectively with the paving crew to ensure coordinated work.

WHO SHOULD ATTEND

- This training is intended for construction workers, machine operators, and site supervisors who are responsible for operating or overseeing hot mix asphalt paving machines on road construction or maintenance projects.

COURSE OUTLINE

Day 1: Introduction to Hot Mix Asphalt and Paving Equipment

- Overview of HMA: composition, grades, and applications.
- Types of asphalt pavers: track vs. wheel, screed types.
- Machine components: hopper, conveyors, augers, screed, and controls.
- Safety regulations: site hazards, PPE, and emergency procedures.
- Daily pre-start inspections: fluid levels, belts, and tire pressure.
- Basic control familiarization: steering, speed, and screed adjustments.

Day 2: Paver Setup and Material Management

- Paver setup: positioning, screed preheating, and sensor calibration.
- Material delivery: truck positioning, dumping, and windrow pickup.
- Screed adjustments: height, angle, and vibration settings.
- Paving techniques: starting a pass, maintaining speed, and stopping.
- Joint construction: transverse and longitudinal joints.
- Common issues: segregation, tearing, and surface defects.

Day 3: Compaction and Quality Control

- Compaction theory: density, air voids, and mat temperature.
- Roller types and operations: breakdown, intermediate, and finish rolling.
- Rolling patterns: longitudinal, transverse, and edge rolling.
- Temperature monitoring: using infrared thermometers and thermal cameras.
- Density testing: nuclear gauge and core sampling basics.
- Correcting defects: checking for cracking, displacement, and roller marks.

Day 4: Advanced Paving Techniques and Troubleshooting

- Paving curves and superelevation: screed crown adjustments.
- Grade control: using stringline, ski, and sonic sensors.
- Troubleshooting mat defects: raveling, bleeding, and roughness.
- Weather considerations: adjusting for temperature, wind, and rain.
- Crew coordination: handwork, material handling, and communication.
- Maintenance awareness: daily cleaning and minor repairs.

Day 5: Practical Application and Assessment

- Practical paving exercise: from setup to finish.
- Quality control documentation: recording temperatures, densities, and observations.
- Cleanup and shutdown procedures.
- Review of key concepts and question-and-answer session.
- Theory assessment: multiple-choice and short-answer questions.
- Practical assessment: operator skills evaluation against unit standard criteria.

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 2**.

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
03 Aug 2026	07 Aug 2026	On-Campus	Pretoria, South Africa
03 Aug 2026	07 Aug 2026	On-Campus	Dubai, UAE
03 Aug 2026	07 Aug 2026	On-Campus	Cape Town, South Africa
03 Aug 2026	07 Aug 2026	On-Campus	Mauritius
03 Aug 2026	07 Aug 2026	On-Campus	Johannesburg, South Africa
03 Aug 2026	07 Aug 2026	On-Campus	Lagos, Nigeria
10 Aug 2026	14 Aug 2026	On-Campus	Mauritius
10 Aug 2026	14 Aug 2026	On-Campus	Cape Town, 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, open the page for this course (Unit Standard 116146) 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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