



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

Shade and Map Images on 3D Models

Communication Studies and Language / Media Studies

Unit Standard 242545 · NQF Level 5 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the skills to shade and map images onto 3D models, enabling them to create realistic textures and lighting effects. Participants will gain proficiency in applying textures and adjusting shading parameters to enhance visual quality in 3D environments.

Category	Communication Studies and Language
Subfield	Media Studies
Unit Standard	242545
Accreditation	SAQA Accredited · NQF Level 5 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply shading techniques to 3D models to simulate lighting and material properties.
- Map 2D images onto 3D surfaces using UV mapping and texture coordinates.
- Evaluate different shading models (e.g., Phong, Blinn) for appropriate use in 3D scenes.
- Implement texture mapping methods such as diffuse, specular, and normal mapping.
- Demonstrate the ability to adjust texture tiling, offset, and blending modes.
- Analyze the impact of lighting and shading on the visual quality of 3D models.

WHO SHOULD ATTEND

- This course is designed for 3D artists, graphic designers, and multimedia professionals who need to enhance their 3D models with realistic textures and shading.

COURSE OUTLINE

Day 1: Introduction to 3D Modelling and Shading Concepts

- Overview of 3D models and rendering pipelines
- Coordinate systems and transformations
- Shading models: flat, Gouraud, Phong
- Light types: ambient, directional, point, spot
- Material properties: colour, specular, diffuse, ambient
- Introduction to UV mapping and texture coordinates
- Software interface: viewports, object selection, basic navigation

Day 2: Texture Mapping Fundamentals

- Procedural textures vs. bitmap textures
- UV mapping: planar, cylindrical, spherical, box
- Seam placement and texture stretching
- Texture coordinates and mapping channels
- Tiling, offset, and rotation parameters
- Creating simple textures in an image editor
- Applying textures to sample objects

Day 3: Advanced Shading and Material Creation

- Shader networks: diffuse, specular, glossy, refraction
- Bump mapping vs. normal mapping vs. displacement mapping
- Opacity and transparency maps
- Reflection and refraction (Fresnel effect)
- Material blending and layered shaders
- Creating and managing material libraries
- Practical exercise: realistic material creation

Day 4: Lighting and Environment Setup

- Three-point lighting: key, fill, back
- HDRI environment maps
- Global illumination: photon mapping, irradiance caching
- Ambient occlusion passes
- Light linking and exclusion
- Optimising light settings for performance
- Practical exercise: lighting a scene

Day 5: Integration and Final Project

- Scene assembly: model, texture, light
- Render settings: resolution, anti-aliasing, output formats
- Common issues: texture seams, stretching, lighting artifacts
- Post-processing basics (colour correction, compositing)
- Final project: shade and map a provided 3D model
- Peer review and feedback session

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 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 24,200.00	R 24,200.00
1	In-House	R 31,400.00	R 31,400.00
1	On-Campus (Pretoria)	R 36,200.00	R 36,200.00

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 242545) 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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