



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

3D Animation Lighting Techniques

Communication Studies and Language / Media Studies

Unit Standard 242547 · NQF Level 5 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the skills to create effective lighting setups for 3D animation, enhancing visual storytelling and mood. Participants will master lighting principles, software tools, and techniques to produce professional-quality renders. The course aligns with SAQA unit standard 242547, ensuring nationally recognised competencies.

Category	Communication Studies and Language
Subfield	Media Studies
Unit Standard	242547
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

- Analyse the role of lighting in conveying mood, depth, and narrative in 3D animation.
- Apply fundamental lighting principles, including three-point lighting, colour theory, and shadow dynamics.
- Design lighting setups for various scenes using industry-standard 3D software.
- Evaluate the impact of light intensity, direction, and colour on rendered output.
- Implement global illumination, ambient occlusion, and other advanced lighting techniques.
- Demonstrate the ability to troubleshoot and optimise lighting for rendering efficiency.

WHO SHOULD ATTEND

- Aspiring and practising 3D animators, visual effects artists, and multimedia designers seeking to specialise in lighting for animation.
- Ideal for those with basic 3D modelling experience who want to elevate their work through advanced lighting techniques.

COURSE OUTLINE

Day 1: Foundations of 3D Lighting

- Physics of light: intensity, colour, and falloff
- Colour theory and temperature in digital lighting
- Overview of 3D lighting tools (Maya, Blender, 3ds Max)
- Three-point lighting: key, fill, and rim lights
- Basic light attributes: shadows, softness, and attenuation
- Using default lights and creating custom lights
- Lighting a simple object to reveal form and texture
- Practical exercise: setting up a basic studio scene

Day 2: Advanced Light Types and Shadows

- In-depth study of light types: area, spot, directional, point
- Shadow mapping vs. ray-traced shadows
- Shadow parameters: resolution, bias, and softness
- Light linking and excluding objects
- Volumetric lighting effects: fog, god rays
- Ambient occlusion and its role in lighting
- Using gobos and cookies for patterned light
- Practical exercise: lighting an interior scene with multiple light types

Day 3: Lighting for Emotion and Storytelling

- Emotional impact of lighting: warm/cool, bright/dark
- High-key vs. low-key lighting
- Lighting ratios and contrast for drama
- Cinematic styles: Rembrandt, chiaroscuro, silhouette
- Motivated lighting: simulating practical sources
- Lighting for time of day: sunrise, noon, sunset, night
- Using light to support character and story
- Practical exercise: lighting a character to evoke a specific mood

Day 4: Global Illumination and Image-Based Lighting

- Introduction to global illumination algorithms
- Photon mapping vs. path tracing vs. radiosity
- Using HDR images for environmental lighting
- IBL setup: mapping, rotation, and intensity
- Combining direct and indirect lighting
- PBR workflow: energy conservation and microfacet models
- Render optimisation for GI: samples, bounces, denoising
- Practical exercise: lighting an outdoor scene with HDR and GI

Day 5: Professional Workflow and Final Project

- Lighting workflow in a production pipeline
- Render passes and AOVs for compositing
- Colour grading in post-production (Nuke, After Effects)
- Light rigs for animation sequences
- Optimising lighting for animation vs. stills

- Common pitfalls and troubleshooting
- Final project: lighting a provided scene from concept to render
- Presentation and peer review of final projects

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
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, open the page for this course (Unit Standard 242547) 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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