



## 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

# Computer Game Design And Development Fundamentals Training

Business, Commerce and Management Studies / Marketing

Unit Standard 117630 · NQF Level 6 · 13 Credits · 10 Days

## COURSE OVERVIEW

This course provides a comprehensive introduction to the fundamental principles and practices of computer game design and development. Participants will gain the skills to conceptualize, design, and prototype digital games, understanding the interplay between storytelling, mechanics, and technology. The course equips learners with a solid foundation for entry-level roles in the gaming industry or further study in game development.

Category	Business, Commerce and Management Studies
Subfield	Marketing
Unit Standard	117630
Accreditation	SAQA Accredited · NQF Level 6 · 13 Credits
Duration	10 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

## LEARNING OUTCOMES

- Apply fundamental game design principles to create a game concept document.
- Analyze existing games to identify core mechanics, dynamics, and aesthetics.
- Design a simple game prototype using industry-standard tools and scripting.
- Implement basic game mechanics, including player input, scoring, and level progression.
- Evaluate game usability and player experience through playtesting and iteration.
- Demonstrate an understanding of the game development pipeline from concept to release.

## WHO SHOULD ATTEND

- Aspiring game designers, developers, and enthusiasts seeking to enter the gaming industry.
- It is also suitable for professionals in related fields such as multimedia, animation, or software development who wish to pivot into game design.

## COURSE OUTLINE

### Day 1: Introduction to Game Design and Industry Context

- What is a game? Core definitions and elements
- Overview of the game development process and team roles
- History and evolution of video games
- The South African game development sector and opportunities
- Introduction to SAQA and unit standard 117630
- Ethical frameworks: representation, addiction, and content
- Career pathways in game design and development

### Day 2: Core Game Design Principles and Player Psychology

- The elemental tetrad: Mechanics, Story, Aesthetics, Technology
- The MDA framework: Mechanics, Dynamics, Aesthetics
- Player psychology: Bartle's Player Types and motivation
- Core game loops and progression systems
- Challenge, skill, and flow theory
- Rules, goals, and conflict in game design
- Introduction to balancing and fairness

### Day 3: Conceptualisation and Pre-Production Planning

- Ideation techniques and creative processes
- Crafting the core concept: premise, hook, and unique selling point (USP)
- Components of a Game Design Document (GDD)
- Introduction to narrative design: story, character, and setting
- World-building fundamentals
- Defining project scope, milestones, and deliverables
- Introduction to risk assessment and mitigation in pre-production

### Day 4: Game Mechanics, Systems, and Prototyping

- Defining and categorising game mechanics (e.g., movement, combat, economy)
- Designing rule sets and win/loss conditions
- Introduction to systems design and emergent gameplay
- The role and methods of prototyping (paper, digital, greybox)
- Playtesting fundamentals: organising sessions and gathering feedback
- Iterative design: the build-measure-learn loop
- Introduction to game balancing techniques

### Day 5: Introduction to Game Art and Audio Fundamentals

- The role of visual design: UI, UX, and environment art
- Art styles and their impact on tone and audience
- Basic 2D/3D art concepts: sprites, models, textures, animation
- Introduction to game audio: sound effects, music, and voice-over
- The art and audio pipeline: from concept to implementation
- Technical constraints: polygon counts, texture resolution, file formats
- Tools overview: introduction to common art and audio software

### Day 6: Game Programming and Engine Fundamentals

- What is game programming? Languages and paradigms
- Core concepts: variables, logic, loops, and functions
- Introduction to object-oriented programming for games
- Overview of game engines: purpose and common features
- Hands-on exploration of a beginner-friendly engine interface (e.g., Godot, Unity basics)
- The game object component model
- Introduction to scripting for game events and behaviours
- Version control basics for collaboration

#### **Day 7: Level Design and User Experience (UX)**

- Principles of level design: layout, flow, and pacing
- Teaching through level design: player onboarding and tutorial design
- Designing challenges, rewards, and difficulty progression
- User Interface (UI) and User Experience (UX) design for games
- Signposting, lighting, and audio cues for player guidance
- Tools for level design: from paper maps to engine editors
- Playtesting for level design and UX

#### **Day 8: Production, Testing, and Quality Assurance**

- The production phase: asset creation, integration, and programming
- Project management for small teams: Agile/Scrum basics
- Quality Assurance (QA) fundamentals: test plans and cases
- Types of bugs: critical, major, minor
- Playtesting methodologies: alpha, beta, focus groups
- Bug reporting and tracking systems
- Introduction to optimisation and performance testing

#### **Day 9: Monetisation, Marketing, and Post-Launch**

- Monetisation models: premium, free-to-play (F2P), subscriptions, DLC
- Marketing fundamentals: identifying target audience, creating trailers, press kits
- Business models and legal basics: intellectual property, contracts, ratings (e.g., PEGI, SA ratings)
- Post-launch strategies: updates, patches, and downloadable content (DLC)
- Community management and building player engagement
- Distribution platforms: Steam, consoles, mobile app stores
- Introduction to analytics and key performance indicators (KPIs)

#### **Day 10: Integration, Portfolio Development, and Career Readiness**

- Final project integration: reviewing a complete GDD for a simple game
- Portfolio development: what to include (concepts, documents, prototypes)
- Crafting an effective CV and online presence for game developers
- Pitching a game concept: structure, delivery, and handling feedback
- Networking and professional bodies in South Africa (e.g., Make Games SA)
- Ethical reflection and social responsibility in game development
- Pathways for further learning and SAQA-aligned qualifications
- Course review and assessment preparation for unit standard 117630

## 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 **13 NQF credits** at **NQF Level 6**.

## PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 39,400.00	<b>R 39,400.00</b>
1	In-House	R 51,200.00	<b>R 51,200.00</b>
1	On-Campus (Pretoria)	R 59,100.00	<b>R 59,100.00</b>

## UPCOMING SESSIONS

Start	End	Method	Venue
18 Jun 2026	01 Jul 2026	On-Campus	Nairobi, Kenya
18 Jun 2026	01 Jul 2026	On-Campus	Blantyre, Malawi
19 Jun 2026	02 Jul 2026	Online	–
22 Jun 2026	03 Jul 2026	In-House	–
23 Jun 2026	06 Jul 2026	On-Campus	Maseru, Lesotho
24 Jun 2026	07 Jul 2026	On-Campus	Nairobi, Kenya
25 Jun 2026	08 Jul 2026	On-Campus	Mbabane, Eswatini
26 Jun 2026	09 Jul 2026	On-Campus	Mombasa, Kenya

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

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