

CENTER FOR PROFESSIONAL DEVELOPMENT**VIDEO GAME ART**

360 Hours/12 Months/Instructor-Facilitated
Course Code: **CPD125** || Course Cost: **\$5995**

OVERVIEW

In this Video Game Art program, you'll learn both technical and artistic skills, applying professional approaches to digital imaging, 3D modeling, model texturing, game animation, color, and lighting.

Modules are structured around practical projects that mirror current practices in game art development. The projects are demanding, and faculty members critique your assignments to help you create your best work. A secondary focus of the program is building the analytical and communication skills that game industry employers seek.

Hands-on projects explore the challenges of modeling, texturing, and animating 3D characters and environments using Autodesk Maya and Adobe Photoshop. Class assignments include industry analysis, concept image development, 3D modeling, tiling textures, 3D lighting, and animation.

OBJECTIVES

By completing the program, you will learn:

- **Game Development:** You will develop an understanding of the components of the game development industry and the way in which games are designed. You will be able to discuss the roles played by different game industry professionals and teams in the development of a game.
- **2D Game Art:** You will learn how to use Photoshop for a range of game art projects including coloring concept art, textures and texture maps, painting environments, and texturing characters. You'll show the ability to apply the fundamentals of art, color, and composition to your work as well as test your Photoshop art in Maya.
- **3D Modeling:** You will be able to construct 3D models in Autodesk Maya, creating and editing primitives by moving, rotating, scaling, and grouping them. You will know how to manipulate objects by selecting components, and rotating, scaling, and transforming them and using Boolean objects to combine or extrude shapes.
- **Tiling Textures:** You will be able to develop tiling textures for video games from reference photos or other source material. You can test and apply textures to 3D objects and environments and apply tiling textures to a range of maps commonly used in video games.

- **Lighting Design:** Your work shows the ability to apply basic three-point lighting techniques in Maya and use shadows and highlights to affect emotion. You can apply ambient, directional, spot, and point lights in Maya and modify their controls for position, intensity, and color, as well as develop and apply shaders that create realistically lit surfaces with color, gloss, reflection, and other characteristics.
- **Character Animation:** Your work will show your ability to apply basic principles of animation with Maya such as squash and stretch, anticipation, and follow through to basic characters and objects. You will be able to develop a believable character walk cycle and use posing within the cycle to create mood and personality.

OUTLINE

This program consists of six required modules:

1. Intro to Game Development
2. Photoshop for Game Artists
3. Maya Basics
4. Tiling Textures
5. Game Lighting and Color
6. Character Animation

Intro to Game Development

Gain an insight into every aspect of how today's video games are created. You'll learn about the business model, the technology platform, the production process, and the genres that define the medium, developing an understanding of the people and processes that drive development. A major goal of the course is to help you understand the different roles in game art and design departments. You'll explore the inner workings of the game development team, finding out how art, programming, audio, design, and QA work together to create a killer product.

Photoshop for Game Artists

Learn techniques for coloring concept art, creating tiling textures, painting environments, working with texture maps, and texturing characters. A wide range of Photoshop tools and techniques are explored, such as vector shapes, custom brushes, time-saving actions, and layer masks. You'll also learn how to apply fundamentals of art, color, and composition to your work. As you work, you'll test your Photoshop art in Maya, an industry-standard 3D modeling program (prior Maya experience not required).

Maya Basics

Unlock the mysteries of this challenging program. You'll develop a thorough understanding of the Maya toolset while learning how to create, edit, and refine polygon models, add textures, apply UV maps, and develop basic animations. Projects include working with primitives, developing complex inorganic models, character modeling, texturing, studying animations, and exporting a scene.

Tiling Textures

Focus on developing tiling textures for 3D environments. Tiling textures, the design of repeated textures for 3D environments, is an essential part of any game artist's job. You'll explore how to create tiles that are the appropriate format and resolution for game engines, removing distracting

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detail and testing your work as you go. You'll study how to address the specific requirements of organic and geometric textures, perspective, and lighting, and you'll learn about the different maps that game developers use to deploy tiling textures.

Game Lighting and Color

Learn the lighting standards and techniques that shape today's game environments. You'll master the basic vocabulary, tools, and controls used to produce lighting effects in 2D and 3D imaging programs. Then you'll tackle the advanced shading and texturing techniques that can bring realism or depth to surfaces. As you learn the applications of fundamental lighting and color technology in Photoshop and Maya, game art pro Jesse Brophy will keep you focused on the artistic and technical aspects of game lighting: how color and lighting shapes the emotion of a character or scene, how it affects the player's experience, and how lighting requires tradeoffs in the design process.

Character Animation

Learn how to apply the classic principles of character animation to 3D models using Autodesk Maya. In six hands-on lessons, you are guided through 14 principles of animation, ranging from squash and stretch and anticipated movement to the expression of personality and thought. Using Maya's high-level animation tools, you'll gain insight into the professional animator's approach, learning to work with hierarchical characters, create effective poses, properly time your shots, develop advanced walk cycles, and even make your characters think.

COMPUTER REQUIREMENTS

This program can be taken on a PC (Windows XP/Vista/7) or Mac (OS X or later). A broadband Internet connection is required.

The following software is required:

- Autodesk Maya
- Adobe Photoshop and basic experience with Photoshop
- Access to one current game console (e.g., PlayStation 3, Xbox 360, or Nintendo Wii)
- A 3-button mouse for use in Maya (required for PC users, recommended for Mac users)

INSTRUCTOR BIOS

Students will receive critique and feedback from a faculty of art and design professionals. Instructors for this program include:

Todd Gantzler is a game artist, educator, and writer. Todd has worked as a 3D artist on such games such as Gex 3D, Cyberia, and Akuji the Heartless and specialized in game design work and character animation. Todd has served as Program Leader for game development degree programs at the Media Design School in New Zealand and at the University of Salford in England. He has been designing and teaching game art and design classes since 2000. Todd's first book *Game Development Essentials: Video Game Art* was published by Thomson Delmar Learning in July 2004. Todd moved into games from work in graphics and animation for TV and film; his film credits include *The Pagemaster* (1994).

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Jesse Brophy is a 3d artist who has worked at a range of game design companies, including THQ, Atari, Breakaway Games, and Sony. Throughout his career he has worked on numerous titles in various capacities including character, environmental, and technical art positions. Jesse currently works at his dream job as an artist for Blizzard Entertainment. Jesse has a BFA in drawing and visual communication from the University of Arizona.

Greg Marlow is an animator and digital artist who currently works at Firaxis Games. When he isn't breathing life into pixels and polygons Greg likes to sleep. When he wakes up he often enjoys reading, writing, playing music, listening to music, learning things he didn't know, and doing things his wife asks him to do. Greg has a certificate from Animation Mentor and a Master's of Science in Digital Media from East Tennessee State University.

Nat Stein is a modeling supervisor and CG artist at Anzovin Studio. He has worked on animation for games such as Sid Meier's Railroads and Halo 2, as well as a variety of TV shows and movies. Nathaniel attended the University of Massachusetts at Amherst, where he also taught courses in Animation and Modeling after his graduation. Nathaniel co-authored the book Visual Quickstart for Maya 7.0, and is currently working on a new book. Nathaniel received his BA in Computer Animation from the University of Massachusetts at Amherst.

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