

GAME DESIGN (GAMD)

GAMD 1009 Introduction to Games (3 Credits)

An introduction to the history of games, terminology, and principles of game design and development. Students will learn to analyze, design, prototype and document a variety of games.

General Education: Arts and Humanities (ARHX), Creativity (CRTY)

Previous: Legacy Equivalent(s): DGA* 109

GAMD 1013 Drawing for Animation and Games (3 Credits)

This course will introduce students to basic drawing concepts, tools and techniques with a focus on drawing/drafting for animated characters and scenes for use in animated presentations and computer-based gaming.

Techniques in line work, linear perspective, volumetric shading and color theory will combine with basic anatomy and caricature styles. The course will include traditional drawing and digital technology.

General Education: Creativity (CRTY)

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 113

GAMD 2001 World Building (3 Credits)

In this course, students will learn to create dynamic worlds with diverse populations, mythology, and characters for games and animation.

Students will use a variety of techniques and processes to develop and design worlds for their concept. World building gives a rich and dynamic canvas on which to develop characters, obstacles, motivations, macro and micro issues, and conflicts and resolutions. Such practice allows for more robust and consistent worlds in which to set singular or serial events in linear and non-linear ways. Using visual and written content, students will develop characters and environments that are influenced by both created and existing cultural and historical content.

Prerequisites: ENG 1010 with a C or higher

Previous: Legacy Equivalent(s): DGA* 201

GAMD 2020 Visual Storytelling and Sequential Art (3 Credits)

This course explores visual narrative theories and techniques. Students become familiar with the discipline of sequential art and the various standard tools and techniques involved for composition, panel design and working with scripts to develop for film, games, comics, television and interactive design.

Prerequisites: GAMD 1013 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 220

GAMD 2024 Digital Painting (3 Credits)

This course will focus on the utilization of digital software and hardware to design and develop original creative illustrations for films, games, literature, and artistic expression. Students will learn lighting and form rendering, advanced color theory, various techniques in composition, and the design and development process for professional output and presentation.

Prerequisites: GAMD 1013 with a C or higher

General Education: Creativity (CRTY)

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 224

GAMD 2063 Animation Foundations (3 Credits)

This foundation course is an introduction to the classic 12 principles of animation focusing on traditional production techniques in a digital format. Students learn how to apply core animation principles through classic animation exercises. Principles of timing, arcs, silhouette, anticipation and follow through are manipulated to visually convey weight, force and emotion to bring otherwise inanimate objects to life.

Prerequisites: GAMD 1013 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 263

GAMD 2071 3D Modeling I (3 Credits)

This course is an introduction to designing and developing three-dimensional objects in a virtual space. Students learn how to create polygonal 3D models using industry standard modeling tools as they explore the basics of materials, lighting, texture mapping and rendering.

Prerequisites: GAMD 1013 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 271

GAMD 2072 Advanced 3D Concepts (3 Credits)

In this course students will use Industry Standard 3D visualization poly-modeling software to explore advance 3D modeling techniques for Organic Modeling, Hard Surface Modeling, UVW unwrapping of advanced and complex objects and Material construction and design. Students will also explore high poly sculpting and 3D painting using a variety of software packages currently in use by professional studios in the Game Design industry, CGI effects, Visual FX and others. Students will take the foundational material from DGA 271 3D Modeling 1 and apply it across multiple project-based assignments. Student will use techniques discussed in class to design, pre visualize, model, UVW unwrap, 3D sculpt or 3D paint complex 3D characters, environments and assets with an understanding of poly resource management, rendering engine limitations, real time rendering requirements in game engines and other professional workflow considerations.

Prerequisites: GAMD 2071 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 272

GAMD 2075 2D Game Level Design (3 Credits)

This course will introduce students to designing and producing computer games in a two-dimensional environment. Students will learn general game theory and level design through analysis of existing games, how to navigate the interface and manipulate basic tools to create interactive levels in the editor of the game engine, and how to manipulate dynamic systems via basic scripting.

Prerequisites: GAMD 1009 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 275

GAMD 2090 Game Studio Capstone (3 Credits)

In this course, students develop a collaborative time-based or interactive project from concept to deliverable design. This capstone course, through professional documentation and the use of game development and animation industry standard project management tools and practices, prepares students for the workforce or continued study through transfer to further education.

Prerequisites: GAMD 2177 - 3D Game Level Design

Previous: Legacy Equivalent(s): DGA* 296

GAMD 2167 2D Animation (3 Credits)

An introduction to 2D animation and 2D rigging techniques using digital tools. Techniques include key framing, timing, walk cycles, 2D animation rigs/skeletons, forward and inverse kinematics. These concepts will be taught using industry standard 2D software that will enable students to effectively create appealing objects, scenes and characters.

Prerequisites: GAMD 2063 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 267

GAMD 2176 3D Animation and Rigging (3 Credits)

An introduction to 3D animation and rigging techniques including key framing, curve editing, timing, squash and stretch, walk cycle, creating bone systems, constraints, skeletons, skinning, Forward Kinematics (FK), Inverse Kinematics (IK) and weight painting. Students will also learn to explore dynamics and particle systems. Students will learn and understand the connection between animation and rigging and specifically how rigging increases quality and productivity in animation production.

Prerequisites: GAMD 2071 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 276

GAMD 2177 3D Game Level Design (3 Credits)

This course will introduce students to designing and producing computer games in a three-dimensional environment. The course will involve working with a 3D game engine and will include essential instruction in working in 3D virtual space, working with the game engine programming language, and producing games that are set in 3D space.

Prerequisites: GAMD 2075 with a C or higher

Additional fees may apply

Previous: Legacy Equivalent(s): DGA* 277