

Game Art

GA101 Animation 1: Principles of Animation

Cr-3

This course explores the principles of animation for 3D artists. Students demonstrate their understanding of the 12 principles of animation by animating a variety of 3D objects.

GA102 Digital Sculpting

Cr-3

This course introduces digital sculpting techniques for creating characters. Emphasis is placed on human anatomy as well as stylized character design. In addition to digital sculpture, this course investigates approaches to the creation of 2D art for anatomy and character design. Students develop the knowledge and technical skills necessary to translate 2D concept art into 3D digital sculpture.

GA103 Texturing

Cr-3

This course introduces the concepts of UV Unwrapping and Texturing to the polygonal modeling production pipeline. Students learn about model UVs, proper unwrapping techniques, texel density, repeating textures, and the creation of materials for use in a variety of contemporary 3D platforms.

GA104 Modeling 1: Introduction to Modeling

Cr-3

This course explores the principal techniques and methodologies involved with polygonal model creation utilized in industries such as 3D game art and animation. Topics include polygon modeling, working with references, proper project and file organization, and introductory rendering and lighting techniques. Projects focus on low-poly modeling, proper edge flow, creating dynamic silhouette and form, and the interpretation and construction of 3D models based off of 2D references.

GA201 Modeling 2: Game Asset Creation

Cr-3

This course explores the creation of complex 3D models for use as props in real-time 3D game engines. Students learn and demonstrate techniques and skill sets employed in current game art production pipelines. Projects focus on the representation of complex objects to stylized and simplified forms, realistic material creations, and the construction of game assets utilizing predetermined polycounts and texture resolutions. Prerequisite: GA104 Modeling 1: Introduction to Modeling

GA202 Lighting and Rendering

Cr-3

This course introduces techniques and concepts in lighting and rendering for 3D content creation. Students learn how to set up and edit virtual cameras, create natural and artificial lighting solutions, and construct model turntables and environment walkthroughs. This course also covers ways to apply post processing effects to achieve enhanced pre-rendered and real-time output.

GA203 Character Creation

Cr-3

This course introduces modeling and character setup for 3D characters. Various modeling and character setup techniques are used to prepare animation production-ready characters. Emphasis is placed on constructing characters that include proper mesh topology, UVs, textures, and rigging. Prerequisites: GA103 Digital Sculpting and GA104 Modeling 1

GA204 Modeling 3: Game Environment Creation

Cr-3

This course explores the creation of interactive 3D game environments using real-time game engines. Students design, model, texture, and assemble custom game levels utilizing current industry leading game engine software. Prerequisites: GA201 Game Asset Production

GA205 Game Art Seminar

Cr-3

This course prepares students for entry into the field of Game Art as practicing professionals through the creation of capstone projects that encompass the skills inherent in the curriculum. Projects are customized by preference and requirements, and additional works may be introduced through direction or proposal. Career materials such as a resume, cover letter, and portfolio are developed. Prerequisites: GA201 Game Asset Production, and GA203 Character Creation

GA206 Applied 3D Technologies

Cr-3

This course covers the theory, role, scope, and practice of emerging 3D technologies for digital animation students. Emphasis is placed on creating projects using 3D printing, photogrammetry, virtual reality, and other technologies relevant to 3D content creation. This course investigates approaches to tool and material use, utilization of software, interfacing with 3D printers, and finishing techniques for 3D prints. Prerequisites: GA203 Character Creation