

UAT-Online: Bachelor of Arts in Game Art and Animation

Program Description

Students in the Game Art and Animation program will gain an insight into what is involved at all levels of game development to create 3D art assets for multiple video game platforms such as PC, consoles, handheld games, Internet, phone and other hybrids. Students will master the artistic principles used in 3D video games art asset creation such as color theory, lighting, shading, anatomy, life drawing, perspective, scene staging, modeling low polygon and high polygon, 3D mesh topology, texturing, rigging, hand key character and prop animations, as well as motion capture and facial animation. Students in this program will be prepared for jobs such as character artist modeler and texture artist, character artist animator and rigger, environment artist modeler and texture artist, environment artist animator, mechanical mesh modeler and texture artist, and mechanical mesh animator and rigger.

How UAT-Online Works

UAT-Online's Bachelor of Arts in Game Art and Animation program has been developed to give students the ability to focus 100% of their attention on each individual skill and class needed to become successful in this rapidly growing field. Classes are taken one at a time, and last five weeks each. Three classes will be taken each semester for a total of 15 weeks per semester. Courses are taken sequentially in order to build on the foundation of previous skills learned. This helps to increase overall understanding and comprehension of the material.

Objectives

1. Demonstrate strong communication skills by explaining artistic choices based on traditional art theories, current game development practices and next gen research.
2. Pre-visualize and concept pre-production art assets for multiple game platforms.
3. Create 2D and 3D art and animation assets such as characters, props, environment (terrain, ecosystems, architecture and skybox), and collision objects; for future prototyping utilizing industry-standard software tools and platform guidelines.
4. Prototype core game art and animation by exporting and integrating assets (including shaders, and lighting) into relevant game engines and critically solves problems by adapting assets to work within the confines and limitations of current game industry tools through the use of modern production pipelines.
5. Establish collaboration, mentorship and professional leadership skills by participating in team projects, coaching junior team members, and working with other disciplines to deliver highly polished and complete projects.

University Core Courses

LAW3700	Legal Issues in Technology
PRO1030	Professional Skills Development
PRO2120	Student Innovation Project
PRO4830	Student Innovation Project & Portfolio Presentation
TCH1500	Technology and Society
TCH3010	Ethics in Technology
INT3500	Internship

General Education Courses

BIO1200	Introduction to Biology
COM2260	Communication in Technology
ENG1010	Composition I
ENG1020	Composition II
ENG3050	Mythology, Folklore and Fairy Tale
ENG3100	Science Fiction as Literature
HIS3050	20th Century Innovation
HIS3350	Ancient Greek Warfare
MAT1550	Math Appreciation
PSY3100	Social Psychology
PSY3600	Psychology of Creativity
TCH1150	Thinking Strategies

Major-Specific Courses

ART1110	Communicating with Color & 2D Design
ART1210	Beginning Drawing I
ART2330	Concept Art
ART2340	Storyboarding
GAA2200	3D Modeling Environments & FX
GAA2300	3D Modeling Characters and Vehicles
GAA2400	Game Texturing
GAM1100	Introduction to Game Art

Elective Courses

ART2360	Basic Character Figure Drawing
ART2400	Sculpting Surface Anatomy
GAA2600	User Interface Design
GAA3600	UI Design & Animation
GAA4200	Advanced Game Environment Creation
GAA4300	Advanced Character Rigging & Mocap Animation
GAM1010	Introduction to Game Design

This list represents the combination of courses necessary for the degree. Course sequence and offerings may change due to software or other scheduling requirements. Students have choices of ways to fill their elective block of courses. It is recommended that students choose the elective in their chosen degree to get the most advanced curriculum in that degree program. Should students choose courses from other degree programs to fill their elective blocks, all pre-requisite requirements will be enforced and students will choose from the Major-Specific Courses, not the more advanced elective block, in the second degree listing. All choices outside of the original degree are subject to availability of the course in the schedule of offerings.



COURSE DESCRIPTIONS

University Core Courses

LAW3700 Legal Issues in Technology

This course addresses typical legal and business issues in the multimedia field. Rights granted under copyright, principles of fair use, trademarks, intellectual property law, trade secrets, unfair competition, disclosure and privacy laws are covered. Students explore these legal topics with focus on electronic media.

PRO1030 Professional Skills Development

Unlike traditional college introduction courses, students learn brain-based study strategies, how to think critically and how to problem-solve. Topics such as cyber bullying, analysis through different perspectives, leadership skills and emotional intelligence will be explored. Students will demonstrate their knowledge through graphic representations, discussion threads, and interactive discussions and debates in class. Through course activities and discourse, students will be exposed to a variety of critical and strategic thinking skills, which they will need to conduct their student innovation projects.

PRO2120 Student Innovation Project

In this course, students will explore potential topics for their innovation project. They will engage in a series of workshop-based exercises to explore their fields and employ discovery learning techniques to find background information on their selected subject. Students will form their ideas into a plan to be used as the basis for developing their innovation. In the process of exploring and sharing their work, students will engage the various types of innovations and demonstrate the ability to communicate their ideas to others.

PRO4830 Student Innovation Project and Portfolio Presentation

This course completes the innovation project and portfolio process providing guidance and structure for the formal presentation of the students' work. Students will passionately and clearly articulate their innovation and portfolio work through public presentations. Students entering this class are expected to have completed all works included in their portfolio and have their innovation brief completed.

TCH1500 Technology and Society

TCH1500 introduces students to essential elements of the historical, contemporary and possible future interdependencies of technology and society. These elements are discovered through readings, discussions and forecasts related to technological development. This course provides students with tools necessary to understand the role technology plays in society and to prepare students for interaction within a technology-driven world. Technology will be recognized as a driving force in cultural revolutions and as a foundational concept of human development. The course will consider rapidly changing technologies in modern society, the problems associated with these changes, and the effects of these technologies on modern culture.

TCH3010 Ethics in Technology

TCH3010 is designed to introduce students to essential concepts necessary to evaluate the ethical implications and potential impacts of the use of new technology within human society and culture. Students will explore modern ethical dilemmas in technology, looking at multiple aspects of how the introduction of technology redefines law and values.

INT3500 Internship

An internship is considered a supervised, practical experience that is the application of previously learned theory. Employers/sponsors work with the student to meet specific objectives and/or learning goals and provide special mentoring or networking opportunities. In exchange, the intern helps the employer/sponsor in meeting overall work goals for the agency/company. Students completing 3.0 credit internships must work a total of 150 hours, or 10 hours per week for 15 weeks.

General Education Courses

BIO1200 Introduction to Biology

This course explores the basic issues of living organisms. The material covered emphasizes molecular and organic biology, as well as the structure and function of plants and animals. Learning activities include lectures, group activities and various practical exercises that help students to better understand biology and to use their knowledge in everyday life, as well as in their future careers.

COM2260 Communication in Technology

Through the exploration of technology concepts, students will introduce, demonstrate, inform and/or persuade the audience. Effective use of voice, nonverbal skills and visuals will be applied to topics such as robotics, virtual reality, internet speech and privacy, and/or technology ethics. Presentations will be followed by student-led discussions and brainstorming sessions about each technology topic. The art of seeing pros and cons pertaining to controversial concepts will be explored through group discussions. And, students will have the opportunity to create a resume and be formally interviewed for a technology position.

ENG1010 Composition I

This course is designed to present effective techniques in organizing, developing and writing academic essays that reflect a collegiate level of writing. The purpose of this course is to help students write correctly, clearly

and thoughtfully. Students will receive an introduction to basic writing and reading skills required for success in college, with emphasis on fluency in personal, descriptive, argumentative and process analysis prose.

ENG1020 Composition II

ENG1020 is designed to introduce students to the essential language, theories and strategies of argumentation and research. The purpose of the course is to provide students with the tools necessary to develop arguments for specific audiences within specific rhetorical situations. Students will also develop their critical reading skills: analyzing, evaluating and critiquing the claims and evidence used by various authors. Finally, students will learn proper research skills and write an in-depth research essay/project.

ENG3050 Mythology, Fable and Fairy Tale

This course will explore various definitions of myth, compare and contrast various mythologies from around the world, and examine the ways myths have evolved over time. We will also study the mythological roots of the fairy tale, compare and contrast fairy tales from around the world, and explore how fairy tales have changed over time.

ENG3100 Science Fiction as Literature

A long time ago, in a galaxy not so far away, science fiction evolved from a variant pulp magazine topic to a literary genre in its own right. Students will study how this genre has evolved from the dark fantasy narratives of the 19th century through the start of the 21st century. Be immersed in novels and engage cutting-edge theories, and be prepared to write intelligently about the reading.

HIS3050 20th Century Innovation

This course examines the role of technology in the 20th century and how it affects us culturally. Key themes include invention of new technologies and debates over the advantages and drawbacks of industrialization, mass production and information technologies. Students participate in a variety of innovative activities designed to understand the changes that took place socially and economically because of these innovations.

HIS3350 Ancient Greek Warfare

This course covers the history and influences of Ancient Greek warfare. The time period and the topics for this course are the Peloponnesian Wars through Alexander's campaigns.

MAT1550 Math Appreciation

This course is designed to introduce students to mathematical ideas that have an impact on the way they view the world. Mathematical concepts in the manner of a "great ideas" course will be discussed. However, the ideas to explore fall within the realm of mathematics.

PSY3100 Social Psychology

Why do people behave a certain way? Can behaviors be predicted, controlled and changed? Have you ever been a victim of somebody who took advantage or tried to manipulate? What are persuasion and brainwashing? This course explores theory, research and application that make up the discipline. It examines both the

traditional areas of the field, as well as more recent innovations. The course pays particular attention to the applications developed by social psychologists. The major goal of the course is to explicitly tie social psychology to lives of students.

PSY3600 Psychology of Creativity

What do Einstein, Picasso and Bill Gates have in common? What are inspiration, insight and improvisation? Are the Muses necessary or is there another way to develop imagination? Students can get answers to these and other questions in this highly interactive course. Discover the genius inside. This course provides a historical review of a variety of approaches to creativity. The material covered emphasizes psychological components of the creative process, the application of creativity in the writing process, the visual arts as well as music, leadership, problem solving and science, the preconditions for creativity and the general characteristics of creative people. Learning activities include practical activities and exercises that can be used to improve personal traits and attributes as well as enhance creative potential.

TCH1150 Thinking Strategies

TCH1150 will offer students a cross-disciplinary, project-oriented approach to applied thinking strategies as they may relate to technologists. Students will learn the logical basis, history, and potential for application of the following dimensions of thinking: critical, systems, creative, lateral, and parallel thinking. Assignments and projects will guide students toward an understanding of how thinking dimensions relate to their intended disciplines in emerging technology industries, as well as to their personal educational aspirations.

Major-Specific Courses

ART1110 Communicating with Color & 2D Design

This course combines the application of color theory and introductory design principles. The function of traditional design principles incorporating color perception and color psychology give students a strong understanding of basic visual communication elements. Digital and traditional methods in design, color issues, and media manipulation are covered, along with designing for an ethnically diverse international audience.

ART1210 Beginning Drawing I

Is drawing a gift that has to come naturally? It is actually a skill like any other. This course will demonstrate how easily it can be learned. Drawing is as much about learning how to see and think about form and space as it is about technique. The drawing part itself is just marks on paper. Those marks come together to tell the viewer something about the world that the artist experienced. Drawing also gives one a deeper understanding of the subject being captured. As students progress through the exercises in this class, they will develop a better understanding of the forms being observed and become more skillful in representing them. Improving drawing skills on paper can improve digital drawing skills. ART1210 is an introduction to basic drawing concepts and provides a basic foundation in drawing. The course emphasis will be on traditional compositional theory, drawing principles, fundamentals

of observing and describing form. Students will gain a strong understanding of tonal and dimensional perspective.

ART2330 Concept Art

Students will learn to sketch, prototype and design functional creations before committing to their actual development. Concept art is a critical skill in increasing the quality and speed of production. Students will learn to craft, present and refine humanoid, animal, biological and environmental concept art that becomes the foundation for future assets.

ART2340 Storyboarding

This course unveils the art of visual storytelling. Storyboarding is an important skill for beginning directors to develop to pre-visualize shots and sets. It is also a critical skill in creating animation sequences and is important to the multimedia developer in planning the needs of a project. Students apply storyboarding techniques to scripts by accurately showing camera angles, placement of the actors, etc. Emphasis is placed on accuracy and presentation.

GAA2200 3D Modeling Environments & FX

This class will explore modeling game environments and special effects using different industry standard modeling procedures, and will discuss when each is appropriate. Students will study organic and hard surface modeling. Areas of emphasis include: sculpting tools, box modeling, Boolean, lofting, modifiers and deformers. Students will complete exercises that build toward a final project.

GAA2300 3D Modeling Characters & Vehicles

This course will explore modeling game characters and vehicles using various industry standard modeling procedures, and will discuss when each is appropriate. Students will study organic and rigid surface modeling techniques and pipelines. Areas of emphasis include: Polygon, Sub-division, and NURBS surfaces with sculpting tools, box modeling, extruding, lofting, modifiers and deformers. Students will complete exercises that build toward a final project.

GAA2400 Game Texturing

This course focuses on the creation of textures for digital games. Students will learn how to create consistent and efficient texture maps from scratch as well as from photo references. Proper mapping and application procedures will also be reviewed. Assignments will help students build their own texture library in order to increase their production speed.

GAM1100 Introduction to Game Art

This course introduces the student to industry-standard game art for video games. Students will recognize, differentiate and analyze game art for 3D video games art and design. Topics include video game art and design history. Video game art assets concepts are illustrated using 2D Art assets made in Adobe Photoshop. Students learn to create art assets that are used in a 2D and 3D final game project. Areas of emphasis include 2D and 3D video game art and design history, as well as 2D and 3D video game animation loops, and the techniques used for game art like box

modeling, UV mapping, 0-to-1 texturing, color map, bump map, normal map, specular map, Alpha channels, decals, sprites, backgrounds and foregrounds, layer and palletize, fonts and color theory.

Elective Courses

ART2360 Basic Character Figure Drawing

This course explores a full range of techniques and artistic viewpoints to animate drawings. Emphasis will be on learning to sketch the human and animal forms in both stick and geometric figures studies. Students will learn the skeletal and muscular make up of the figures. Studies in the form of homework assignments will be required as well as in class work. Long and short poses will be interspersed with exercises specifically designed to allow artists to heighten perceptions. Students will practice using the formulas for making character sketches more realistic by understanding the volumetric description and underlying structure of the human form. This course provides the most thorough experience drawing from live models.

ART2400 Figure and Character Sculpting

This course deals with the creation of maquette clay statues used by moviemakers, 2D animators, CGI animators, merchandise designers and theme park designers as exact drawing guides and production tools. Emphasis will be on selecting characters and setting up armature poses. Polymer clays and aluminum armature wire are used. Students will be expected to produce character sketches for communicating visual ideas. The process includes initial drawings that will involve sketching and exploring proper character and animal poses. The emphasis of the course will be to complete several finished polymer clay figures of the characters and animals designed.

GAA2600 User Interface Design

This course will cover core concepts of user interface with respect to popular genres within game design. Past, present, and future functionality and interactivity will be examined, their current day application, with an emphasis on current trends for 2D and 3D game interface. Students will prototype and implement their designs into available game engines.

GAA3600 UI Design & Animation

This course will build on the student's skills in creating interactive and visually compelling menus and HUDs as seen in today's high-profile titles. The student will script design solutions and problem solve communication issues using industry standard 2D and 3D UI animation software and scripting tools. Assignments will emphasize the visualization and creation of interface transitions with stylish animation.

GAA4200 Advanced Game Environment Creation

Current AAA games feature amazing environments that drip with atmosphere and stunning interactive details. Throughout this course students will research the latest trends in level modeling, and apply their skills in the development of advanced architectural and organic models needed for current game development. Assignments will lead the student to create a complete game environment that is ready to add to their portfolio.

GAA4300 Advanced Character Rigging & Mocap Animation

Students will learn the importance of good planning and problem solving as they relate to character design for 3D animation. Course topics will cover: character setup, inverse kinematics, joints and bones, deformers, set-driven keys, bipedal and quadruped setups. Students will be immersed in hands-on motion capture exercises and explore advanced techniques for blending actions and mapping data to multiple characters. Students will create a fully functional character rig and apply animation to it.

GAM1010 Introduction to Game Design

Whether the goal is to become a game designer, artist or programmer, this course is a path into the world of video game production. Students will explore what career paths lay ahead in the respective areas of game development through an understanding of the game design process and develop awareness of the many positions within the game industry. By learning fundamental design and visualization techniques needed to express complex game ideas, students will apply professional documentation techniques to their projects. Students will also learn how to convert their own game-playing skills to tools used to analyze popular games and break down game play elements to discover what makes the greatest games tick.