

# UAT-Online: Bachelor of Arts in Game Design

## Program Description

Game Design students focus on the design principles, skills and techniques required to create the systems, design documents and prototypes for complete game projects. Courses will emphasize design skills such as strong initial concepts, game documentation, game balance and play-testing, interactive storytelling and interface design. Students in the Game Design program will also develop a critical approach to the study of gameplay, interaction and design. In a team-based environment, design students will work with artists and programmers to create completed projects. Game Design students will also be exposed to all the tools of the trade, as well as programming and art skill sets. This well-rounded approach provides students with a deep understanding of all aspects in the game creation process.

## How UAT-Online Works

UAT-Online's Bachelor of Arts in Game Design 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

- Prototype and produce original game concepts for web, console, PC and handheld gaming platforms including all the production materials required in a complete production pipeline.
- Create and implement game designs focusing on sound design principles and aesthetics utilizing industry-standard tools, software, and production processes.
- Analyze gameplay of existing games across platforms and genres focusing on design principles and best practices and evaluate the effectiveness of the design work.
- Establish leadership, communication and project management skills by participating in team projects with students from other disciplines and areas of concentration using industry-standard project management tools and methods.
- Demonstrate high-level writing and analysis skills to promote the creation of clear, concise documentation and strong communication of technical and design information to a wide range of audiences.
- Integrate the complete game production process and all the tasks and tools of game design into your project development and completion.

## University Core Courses

INT3500/4000	Internship
LAW3700	Legal Issues in Technology
MGT1120	Project Management in a Technology Environment
PRO1020	Professional Skills Development
PRO2510	Senior Innovation Project I/II: Topic Paper and Project Plan
PRO3000/3010	Senior Innovation Project III: Analysis
PRO4810	Senior Innovation Project IV & Portfolio: Presentation
TCH1100	Foresight Development
TCH3010	Ethics in Technology

## General Education Courses

BIO1200	Introduction to Biology
COM2260	Public Speaking
ENG1010	Composition I
ENG1020	Composition II
HIS3050	20th Century Innovation
ENG3100	Science Fiction as Literature
ENG4120	Graphic Novel
MAT1550	Math Appreciation
PSY1500	Psychology of Thinking
PSY3600	Psychology of Creativity
SOC1500	Technology and Society

## Degree-Specific Courses

ART1050	Communicating with Color
ART1080	2D Design
ART2340	Storyboarding
ART3560	Environmental Design
GAM1010	Introduction to Game Design
GAM1500	Evolution of Game Design
GAM1700	Game Design Workshop I
GAM2000	Critical Game Studies
GAM2150	Game Scripting
GAM2300	Level Design
GAM2350	Game AI Concepts
GAM2800	Rapid Game Prototyping
GAM3300	Advanced Level Design
GAM3700	Game Design Workshop II
GAM3800	Serious Game Design
GAM3850	Casual Game Design
GAM3900	Experimental Gameplay
GAM4050	Applied Game Development
GAM4150	The Business of Gaming
GAM4300	Game Production and Documentation

*This list represents the combination of courses necessary for the degree. Course sequence and offerings may change due to software or other scheduling requirements.*

*To learn about UAT-Online's Associate of Arts in Game Design, please see the UAT-Online catalog.*



## COURSE DESCRIPTIONS

### University Core Courses

#### **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.

#### **INT4000 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 6.0 credit internships must work a total of 300 hours, or 20 hours per week for 15 weeks.

#### **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.

#### **MGT1120 Project Management in a Technology Environment**

This course covers every aspect of managing a project in a technology environment, from assembling the right team to figuring out a schedule, estimating needed resources and monitoring its progress. This course will cover determination, examination and critiques of current practices in project management with an emphasis on the use of technology to support project development. Also included are real-life project management problems such as the following: how to get results when there is no direct authority over participants, what to do when team members don't follow through, how to handle differing departmental agendas and how to balance regular work with additional responsibilities. Communication skills will also be emphasized.

#### **PRO1020 Professional Skills Development**

This course is designed to develop life-long learning strategies and provides the basic skills for success in the educational, professional and personal environment. Specific topics explored are personality profile analysis, developmental styles, conflict resolution skills, group problem solving and learning style analysis. Collaboration and group skills development will be emphasized.

#### **PRO2510 Senior Innovation Project I/II: Topic Paper and Project Plan**

The purpose of this course is to develop students as technologists. Students will explore and critically analyze a potential and emerging topic for a thesis and shape their ideas into a form that represents a clear set of thinking to be used as the basis for developing their innovation. In creating a topic document based upon these investigations, students will demonstrate the ability to communicate technology ideas to others and increase the likelihood that the idea will take form and find a relevant application in society. The course will culminate with the composition and approval of the student's topic paper. The topic paper will include an abbreviated introduction of the innovation, short prior art identification and general methodology.

#### **PRO3000 Senior Innovation Project III: Analysis**

This course continues the journey towards the completion of the student thesis and should be taken after the actual innovation or hypothesis has been tested, and students are ready to compose analysis/results and the conclusion to the work. This course will culminate in the composition and approval of thesis chapters including Results (Chapter 4) and Conclusions (Chapter 5).

#### **PRO3010 Senior Innovation Project II: Analysis and Patent Processes**

This course continues the journey towards the completion of the student thesis and should be taken after the actual innovation or hypothesis has been tested and students are ready to compose analysis/results and the conclusion to the work. This course is an alternative to PRO3000 and includes the exploration of the student innovation for a patent application. Students will be exposed to the concepts of patents and patent applications. The course will culminate in the composition and approval of thesis chapters including Results (Chapter 4) and Conclusions (Chapter 5).

#### **PRO4810 Senior Innovation Project IV & Portfolio: Presentation**

This course completes undergraduate thesis and portfolio process providing guidance and structure for the formal presentation of the student's work. Students will passionately and clearly articulate their innovation, technology concepts and application in a formal defense. Students entering this class are expected to have completed all works included in their portfolio and have their thesis chapters approved through the completion of prior thesis course work prior to enrolling.

**TCH1100 Foresight Development**

Foresight is the act of looking to the future. This course teaches better global, business and personal foresight to better enjoy and manage your own future. This course will explore the big picture history of accelerating change from universal, historical and technological perspectives, as well as identifying global trends that are affecting individuals, society, businesses and governments. Additionally, the course will examine how organizations make bets on the future and gives the student a chance to explore career prospects in a variety of fields. Finally, discussion of how biology, psychology, community and culture help and hinder personal thinking about the future will be discussed. We will articulate and explain the four fundamental foresight processes: innovating the future (creative development of products and services); planning the future (developing shared goals and processes); profiting in the future (achieving measurable positive results, including environmental, social, and economic benefits); and predicting the future (trend identification and analysis). Assignments will be fun, personalized to foresight goals, and will include brief readings, brief writing, discussions, debates, visuals, film, podcasts and games.

**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.

**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 Public Speaking**

Public Speaking in Technology offers instruction and practice in speech organization and delivery with purpose and audience in mind. Students will create effective presentations to introduce, demonstrate, inform and persuade through technology-related topics. Information on effectively utilizing voice, nonverbal skills and visuals will also be included.

**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.

**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.

**ENG4120 Graphic Novel**

This course will consider a selection of contemporary graphic novels specifically centered on those that have received either critical acclaim or notoriety. Until recently, this genre of literature has been dismissed as "childish" or, even worse, as "funny books" not worthy of critical consideration. As part of the class, students will engage some of the fledgling criticism about graphic novels as well as related concerns regarding visual theory. Students will test theories with hands-on projects and some challenging but intriguing readings. Students will place each work in its unique historical and political context... a journey that will cross the globe and hearken back to the 19<sup>th</sup> century all within the span of a few weeks.

**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.

**MAT1550 Mathematics 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.

**PSY1500 Psychology of Thinking**

PSY1500 will examine the writings of Pythagoras, the father of formal mathematical thinking; Aristotle's major works, including his 100-plus tests for the truth of any proposition; and other major thinkers from the classical period to modern times, including Francis Bacon, Galileo and other progenitors of the natural and behavioral sciences. The course will close with a survey of living thinkers, including "system thinkers" and a study of the major books by Edward de Bono.

**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.

**SOC1500 Technology and Society**

SOC1500 is designed to introduce students to the essential understanding, development, theories, strategies and historical interrelation of technology and society. The purpose of the course is to provide students with the tools necessary to understand the role technology has played in society and to prepare students for interaction in a technology driven world with a comprehensive look at the relationship between technology and culture. 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 affects of these technologies on the societies and cultures around the world.

**Degree-Specific Courses****ART1050 Communicating with Color**

This course applies color theory as an element for communication and expression as applied to traditional and digital design in the visual communications field. This fundamental course includes color theory, color interaction, color psychology, color perception in an ethnically diverse international audience, and color trends. This course covers creative and technical aspects of color design issues using digital illustration and traditional media manipulation.

**ART1080 2D Design**

ART1080 is an introduction to design concepts with an emphasis on traditional compositional theory, design principles and elements. This course is designed to give students a strong understanding of two-dimensional visual elements as they pertain to traditional media.

**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.

**ART3560 Environmental Design**

Environmental design requires combining theories of architecture, landscape design and the cinematographer's eye to create environments with dramatic lighting, mood-setting characterizations, compound perspectives and a mix of functionality and aesthetics. By applying principles of design and flow to existing knowledge of tools and techniques, students will create immersive and interactive environments that aren't merely background noise, but a part of the complete experience.

**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.

**GAM1500 Evolution of Game Design**

This is a critical review of the technology and design history of video games, from the first all-analog machines to the powerful console systems of today. This course will discuss primary innovators and historical figures of the industry and the origins of game design elements such as scoring, risks and rewards, level design, interacting with AI and interface design. Through analysis and example, students will look at the development of the industry, the formation of the classical game genres, the explosion of game-related technology and the possible futures of the field. These design lessons will be applied to simple projects to reinforce how game design elements from three decades ago still shape our industry and its products.

**GAM1700 Game Design Workshop I**

This course explores the invention, revision and presentation of game design ideas in an atmosphere similar to a creative writing workshop. Students will work singly and in small groups to develop game ideas, compare and contrast them with published games and then create focused design documents for potential future production. The end product will be several robust, polished game designs that have been tested by the most critical audience—your peers.

**GAM2000 Critical Game Studies**

This course is an introduction to advanced critical techniques and approaches to game design, analysis of games and game theory. Using techniques of critical theory, ludology and semiotics, students will explore the structure of games, interaction with the user and how games balance rules with freedom and risk with reward. The course will also delve into interface design, user control issues, data representation for the gamer and feedback loops. Present and future game genres will be examined and compared and contrasted among different platforms and styles of play.

**GAM2150 Game Scripting**

High-level scripting languages allow for rapid development, content creation and interactive events, and drive all of today's professional game engines and tools. Used for both game logic and automation tools, scripting has become a crucial tool in game production. Some scripting languages are so well integrated with a given game engine that users can create an entire game with script code. Students will learn one or more scripting languages during this course, which may include LUA, Python, TorqueScript, Ruby or ActionScript. Projects will include stand-alone script programs as well as game engine scripting projects.

**GAM2300 Level Design**

This course will cover the topics in level design, including history and types of games, the role of the level designer, good level design, player puzzles and strategies that will keep players interested in a game, and level creation that is challenging for players and not overly difficult for average players.

**GAM2350 Game AI Concepts**

Artificial Intelligence is at the core of the modern interactive experience in video games. This course is a survey of the many approaches to creating realistic, interesting behavior from a design point of view, while experimenting with concepts such as pathfinding, sensory systems, flocking, scripted events, heuristics and genetic algorithms. Students will use a variety of tools to create functioning projects that demonstrate class concepts and study various game AI systems and theories.

**GAM2800 Rapid Game Prototyping**

In a fast-paced industry, prototypes are becoming the key to understanding and refining complex gameplay before committing to full-scale development. Students will create traditional paper prototypes as well as use industry standard tools such as Flash and Torque Game Builder to rapidly prototype and study several self-contained projects. The goal is to become adept at turning game ideas into practical game mechanics and the foundations for future complete game projects.

**GAM3300 Advanced Level Design**

Having mastered the basics, students in this course will apply level design principles to the creation of entire game environments, interactive elements and objects, storytelling through level design and texturing and lighting. The emphasis will be on using advanced game engines and their toolsets and may involve expert topics such as texturing with shaders, cut scenes, scripted events and large-scale environments.

**GAM3700 Game Design Workshop II**

This course explores the invention, revision and presentation of game design projects in an atmosphere similar to a creative writing workshop. Students will work singly and in small groups to rapidly develop game projects using industry-standard tools and languages. The end product will be several robust, polished games that have been tested by the most critical audience—your peers.

**GAM3800 Serious Game Design**

Games that teach, test, train and pose complex, realistic challenges to the player have been branded Serious Games. Using game technologies to teach is not a new concept, but the recent reinvigoration of this genre puts the spotlight on games that focus on giving the gamer new experiences and learning opportunities rather than an endless chain of aliens to slay. Using contemporary theories of electronic education, students will create and prototype games with a message to their mechanics. Students will study "stealth" serious games as well as institutional tools and tutorials, games based on scientific principles and simulation, and the future of gameplay in education.

**GAM3850 Casual Game Design**

Accessible, easy-to-play (but difficult-to-master) games are the bridge by which many customers enter the video game market, and an increasingly large pool of gamers make casual games their genre of choice. The casual game must be elementary in design but deep in execution; it must fit the genres and platforms of choice for casual gamers and give both the novice and the expert a memorable challenge. In this course we'll design, prototype and build casual games that move beyond *Tetris* and *Solitaire* clones and advance the genre as a whole.

**GAM3900 Experimental Gameplay**

Beyond the conventions of genre and the limitations of the commercial market lies the unexplored territory of radical new styles and types of gameplay. This course will toss out traditional genre in favor of blended designs and fresh ideas and explore such diverse topics as ARGs, user-generated content, physics and graphics toys, algorithmic games, one-button games and alternative interfaces and input devices. Students will research game technologies and theorize designs based on what the game industry might become in the future.

**GAM4050 Applied Game Development**

This course concentrates on techniques to produce a game from the standpoint of production. Students will tackle topics such as people management, team building, communication and workflow in order to grasp the complexities of running a development team. Game teams and projects continue to grow in size and complexity and it is essential to have an understanding of everything is involved in game development.

**GAM4150 The Business of Gaming**

This course addresses the economics of the game industry and covers the ways games are funded, marketed and sold, as well as the relationships between publishers, developers, retailers and other companies. Other topics to be covered include legal issues of gaming, intellectual property laws, the social forces that impact games and the governmental and legislative forces that impact game content.

**GAM4300            Game            Production            and  
Documentation**

The ability to clearly communicate exactly what a game is, how it plays, what it will feel like, how it will look and, more importantly, how a team will get it done are facts that make or break projects at both the pitch stage and during review points in actual development. Whether you are a game designer, programmer, artist or game production/manager, this course will prepare students for the exciting road ahead as a game developer, learning cutting edge techniques for creating and pitching advanced planning and documentation of game projects. Students will ultimately create a game design document representative of professional quality documentation found in leading game studios and master the art of pitching to multiple audiences from team members to executive decision makers.