GAME AND INTERACTIVE MEDIA DESIGN

Overview

Students will learn to analyze, conceptualize, and create games and interactive media, in addition to exploring motion-capture, animation, audio, non-linear narrative, software interface design, and user experience design. All students will complete courses covering media theory, interactive system design, basic software development, visual art and design, and general education. Additionally, they will select electives focusing on areas such as visual design, 3D, audio design, narrative design, or project management. The degree culminates in a multi-disciplinary, year-long project, equipping students with the skills, theoretical framework, experience, and portfolio necessary for entry into the gaming industry or related interactive media fields.

Degree Offered

- B.A. in Game and Interactive Media Design

Contact

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Program Website: Game and Interactive Media Design (https://www.rider.edu/academics/colleges-schools/college-arts-sciences/communication-media-arts/undergraduate/game-interactive-media-design/)

Associated Department: Department of Media Arts (https://www.rider.edu/academics/colleges-schools/college-arts-sciences/communication-media-arts/faculty-departments/media-arts/)

Related Programs:

- Graphic Design (http://catalog.rider.edu/undergraduate/colleges-schools/arts-sciences/majors-minors-certificates/graphic-design/)

Game and Interactive Media Design Program Requirements

(55 credits)

Courses with the **GAM** prefix required for this major build upon your growing knowledge and should be taken in the sequence displayed in the table below:

Code	Title	Credits
Required Courses:		
ART 150	Digital Foundations	3
ART 106	Survey of Art History II	3
COM 105	Communication, Culture and Media	3
COM 131	Fundamentals of Video Production	3
or FTV 135	Filmmaking I	
COM 302	Communication Ethics	3
GAM 100	Game & Interactive Media Forum	0
GAM 120	Introduction to Game Logic	3
GAM 150	Intro to Game Studies	3
GAM 200	Game Design	3
GAM 201	Game Development I	3
GAM 290	G&IMD Portfolio Workshop	1
GAM 301	Game Development II	3
GAM 310	Special Topics in Game Design [1]	6
GAM 401	Game Workshop I	3
GAM 402	Game Workshop II	3
Elective Courses		
Select 12 credits from the following:		12
ART 103	Fundamentals of Drawing	
ART 230	Three-Dimensional Design	
ART 352	Motion Graphics	
ART 493	Special Topics in Studio Art	
CIS 200	Application Development with JavaScript	
CIS 325	User Experience Design	
COM 202	Color Theory	
COM 213	Typography	
COM 265	3D Graphic Animation	
COM 365	Graphic Animation	
COM 367	3D Graphic Animation II	
ENG 304	Creative Writing: Fiction	
ENG 312	Creative Writing: Screenwriting	
FMS 286	Writing Short Screenplays for Digital Cinema	
FTV 235	Filmmaking II	
FTV 221	Animation: History, Art, Industry & Culture	
FTV 236	The Aesthetics of Filmmaking	
FTV 238	Screenplay Fundamentals	
FTV 241	Sound Design	
FTV 435	Filmmaking III	
GAM 491	Internship in Game Design	
MUS 113	Popular Music Theory I	
MUS 213	Digital Composition of Popular Music	
MUS 220	Songwriting	
MUS 313	Digital Synthesis	
MUS 316	Digital Mixing and Mastering	
SPT 250	Introduction to the Business of Sports	
Total Credits		**55**

[1] GAM 310 Special Topics in Game Design must be taken twice with different topics to meet the requirement.

Academic Plan of Study

The following educational plan is provided as a sample only. Rider students who do not declare a major during their freshman year; who are in a Continuing Education Program; who change their major; or who transfer to Rider may follow a different plan to ensure a timely graduation. Each student, with guidance from their academic advisor, will develop a personalized educational plan.

Course	Title	Credits
Year 1		
Fall Semester		
CMP 120	Seminar in Writing and Rhetoric	3
or BHP 100	or Honors Seminar: Great Ideas I	
COM 105	Communication, Culture and Media	3
GAM 120	Introduction to Game Logic	3
GAM 200	Game Design	3
GAM 100	Game & Interactive Media Forum	0
ART 150	Digital Foundations	3
	Semester Credit Hours	**15**
Spring Semester		
GAM 100	Game & Interactive Media Forum	0
GAM 150	Intro to Game Studies	3
GAM Elective		3
COM 131	Fundamentals of Video Production	3
or FTV 135	or Filmmaking I	
ART 106	Survey of Art History II	3
CMP 125	Seminar in Writing and Research	3
or BHP 150	or Honors Seminar: Great Ideas II	
	or Literature and Composition	
or		
CMP 203		
	Semester Credit Hours	**15**
Year 2		
Fall Semester		
GAM 100	Game & Interactive Media Forum	0
GAM 201	Game Development I	3
Minor/Free Elective		3
Three General Education Courses		9
	Semester Credit Hours	**15**
Spring Semester		
GAM 100	Game & Interactive Media Forum	0
GAM 301	Game Development II	3
COM 302	Communication Ethics	3
One Minor/Free Elective Course		3
Two General Education Courses		6
	Semester Credit Hours	**15**
Year 3		
Fall Semester		
GAM 100	Game & Interactive Media Forum	0
GAM 310	Special Topics in Game Design	3
GAM Elective		3
Two General Education Courses		6
One Minor/Free Elective Course		3
	Semester Credit Hours	**15**
Spring Semester		
GAM 310	Special Topics in Game Design	3
GAM 100	Game & Interactive Media Forum	0
GAM Elective		3
Two General Education Courses		6
Two Minor/Free Elective Courses		6
	Semester Credit Hours	**18**
Year 4		
Fall Semester		
GAM 401	Game Workshop I	3
GAM 100	Game & Interactive Media Forum	0
Four Minor/Free Elective Courses		12
	Semester Credit Hours	**15**
Spring Semester		
GAM 402	Game Workshop II	3
GAM 100	Game & Interactive Media Forum	0
GAM elective credits		3
Two Minor/Free Elective Courses		6
	Semester Credit Hours	**12**
	Total Credit Hours for Graduation	**120**

Courses and Descriptions

ART 103 Fundamentals of Drawing 3 Credits
An intensive study of drawing techniques in charcoal, pencil, and pen and ink.

ART 106 Survey of Art History II 3 Credits
The history of Western art, architecture, sculpture, painting from the Renaissance to the present, emphasizing the relation between the arts and ideas of each period.

ART 150 Digital Foundations 3 Credits
Industry standard digital tools are used to explore the basic concepts of composition, form, texture, value, and color in two-dimensional design. Further consideration of digital formats and technologies in the visual arts will be highlighted.

ART 230 Three-Dimensional Design 3 Credits
Beginning problems in traditional sculptural materials (clay, wood, stone) and design-construction in mixed media.

ART 352 Motion Graphics 3 Credits
This course will provide an introduction to the use of industry standard tools and methods employed in motion and animation design. Concepts of composition, form, style, and continuity of motion will be key. Focus will be placed on 2D rendering with contemporary tools, as well as underlying theory and critique. Consideration of cross-media techniques utilized in game design, streaming media, film and television will be highlighted.
Prerequisite(s): ART 150.

ART 493 Special Topics in Studio Art 3 Credits
Study in drawing and painting of a particular style, such as abstraction or subject, such as still life; or particular aspects on a museum collection, such as the Metropolitan.
Prerequisite(s): ART 103 and ART 105 or Permission of Instructor.

COM 105 Communication, Culture and Media 3 Credits
Provides a detailed investigation and analysis into the nature, history, scope, adequacy, and limitations of mass communication and examines the reciprocal influence of the media on culture and society. This course counts towards the fulfillment of the Disciplinary Perspectives element of the CLAS general education curriculum.

COM 131 Fundamentals of Video Production 3 Credits
Introduces students to basic video production theories, techniques, and applications. Students will gain competency in a number of video production areas including: production planning, camera operations, lighting, sound, and digital non-linear editing. Individual and group production exercises will involve planning and executing video productions in both studio and non-studio settings. This class is designed to prepare students from any major to effectively create, produce, shoot, and edit basic video production assignments including public service announcements, video news releases, educational/instructional videos, and marketing/promotional spots.

COM 202 Color Theory 3 Credits
Introduces the fundamentals of Color Theory by studying the scientific principles of the color wheel, the logic of color structure, as well as the emotive principles of color, color harmony, qualities, and combinations. This course will help students sharpen and train to recognize, describe, define, replicate, and identify color in everyday experience, especially in visual communication design.

COM 213 Typography 3 Credits
Introduces students to the basics of typographic techniques and design aesthetics and provides an overview of the basic fundamentals of type design as they apply to graphics, advertising, the arts, and other areas of visual communication. The course focuses on how typography can be used as a communicative device as well as a graphic, compositional, and expressive element.

COM 265 3D Graphic Animation 3 Credits
Provides students with an introduction to the basics of 3D graphic animation techniques including modeling, texturing, rendering, visual effects and animation using Maya software. Through various projects the students will learn: to model characters, sets and props, how to apply textures and color to their models, and how to bring their creations to life using various animation techniques. In addition to the technical aspects of creating successful animation, the students will also learn the aesthetics of animation in regard to cinematography, art direction, lighting, character creation, prop creation, and set creation, dramatization and narrative.

COM 302 Communication Ethics 3 Credits
Analyzes internal and external pressures on the communication professional including economic, cultural, social, and political pressures, assesses the philosophical and practical basis for responding to such pressures, evaluates contemporary media responses to these pressures, identifies those that are of laudable quality and why, and provides guidance as to how individuals and organizations can think and react ethically. Issues addressed include censorship, confidentiality, conflicts of interests, minority and ethnic groups, privacy, sensationalism, and self-criticism.

COM 365 Graphic Animation 3 Credits
Students receive an education in motion graphics and animation theories, development techniques, and preparation for various multimedia applications. Emphasis is placed on the design principles used in motion graphics and animated communication to effectively convey information in an entertaining and engaging manner. The course covers the integration of sound and imagery through graphic animation techniques, compression, rendering, input/output file formats, and delivery. Projects include the creation of web banner ads, title sequences, a music video, and an original final project. The primary software for this course is Adobe Photoshop, Adobe AfterEffects, and a taste of 3D animation using Maya. Students will be expected to participate in critiques of professional animation designs in order to learn to critically evaluate their own work and their fellow students' work.
Prerequisite(s): COM 262 or permission of instructor.

COM 367 3D Graphic Animation II 3 Credits
Continue to learn the techniques of 3D computer animation including modeling, texturing, rendering, visual effects and animation. In addition to the technical aspects of creating successful 3D animation the students will also learn the aesthetics of animation in regard to cinematography, art direction, lighting, character creation, prop creation, and set creation.
Prerequisite(s): COM 265.

CIS 200 Application Development with JavaScript 3 Credits
In the early 1990s, Tim Berners-Lee created a set of technologies to allow information sharing at the CERN particle accelerator in Europe. These technologies dramatically changed the face of computing and became what we know today as the Web. Understanding how to develop and manage applications for the Web is a requirement for the information system professional. Because of the ease of development, deployment, maintenance and general scalability of Web applications, this approach to building and managing applications has become the de facto standard for business application development. This class will examine Web application development in detail. Through a combination of lecture and labs, students will learn the architecture of Web applications, how to develop Web pages using HTML and CCS, how to control user interaction with those pages using the JavaScript programming language. The programming basics of variable declaration and usage, program flow of control, function declaration and calling, and object usage and declaration will also be shown. The use of the JQuery Javascript library to ease the development of Web pages will also be shown.

CIS 325 User Experience Design 3 Credits
This course focuses on the critical role user experience plays in today's technology-driven business world. While technology advances make the design of functionality more readily in interactive products, usability plays a critical role in determining their success in the real world. Increasingly, business leaders realize the need to consider the emotional and social experiences as well as functional requirements and the steps users take to complete a task. This course explores User Experience Design (UXD), and its strategic importance in creating competitive advantage. Students will be able to discover, define, develop, and deliver a complete user experience. They will understand the role of usability and design principles, build innovative and pleasurable user experience prototypes, and validate them to achieve human, social, and business goals.

ENG 304 Creative Writing: Fiction 3 Credits
Students write original fiction and analyze the techniques of writing fiction in discussion of both their own drafts and published examples of the form.
Prerequisite(s): completion of composition requirements or permission of instructor.

ENG 312 Creative Writing: Screenwriting 3 Credits
A workshop teaching and analyzing how students write for the screen, both television and film, that pays particular attention to the demands of the genre. Through reading and writing assignments, students will discuss and analyze the development of their own dramatic scripts for production. A portfolio of revisions will serve as a final for the course.

FMS 286 Writing Short Screenplays for Digital Cinema 3 Credits
Writing Short Screenplays for Digital Cinema will focus solely on the creation of a short screenplay for digital film. The course will ask that students conceive of and execute a viably producible screenplay, shooting script, and industry pitch for the modern market.

FTV 135 Filmmaking I 3 Credits
Filmmaking I introduces students to basic film and television production theories, techniques, and applications. Students will gain competency in a number of production areas including composition, lighting, filmic storytelling, sound, production planning and editing. As well as gaining practical production experience, students will also be introduced to basic art theory in relation to composition and visual storytelling.

FTV 221 Animation: History, Art, Industry & Culture 3 Credits
An introduction to the history of animation in film and television, this course will explore animation as art, industry, and purveyor of culture. Through this course, students will gain a greater appreciation for aesthetics, technology, and the cultural and communication theories impacting and influencing the genre, and gain a greater understanding of the role played by key individuals and companies in the development of both iconic characters and in the shaping of an industry. Students will view a variety of important animated films and television programs and discuss the artistic, technical and narrative developments in animation from the early 20th century to the present. This course will provide students with a more nuanced understanding of the magic of animation and its impact and influence on culture and society throughout the globe.

FTV 235 Filmmaking II 3 Credits
This course will build on the basic technical proficiency gained in COM 135 as applied to narrative filmmaking. Working as individuals and in groups, students will develop skills in narrative cinematic storytelling, and gain a basic proficiency in filmmaking theory, techniques and applications. Students will gain competency in a number of production areas including idea generation and scripting, production planning, cinematography, lighting, sound and editing.
Prerequisite(s): FTV 135 or COM 131.

FTV 236 The Aesthetics of Filmmaking 3 Credits
Introduces general students (other than FTV majors or FMS minors) to a greater appreciation of film art and the various generic and artistic approaches adopted by noteworthy filmmakers through the course of film history. Through film viewing, class discussion, readings, essay writing and creative responses, students will learn how formal choices in cinematography, production and sound design, screenwriting, and acting shape cinematic themes and atmosphere, while forging viewer identification and eliciting emotional response. Among readings will be those on introductory film theory, key works of film criticism, interviews with filmmakers, and scholarship on the aesthetics and ideological underpinnings within various film genres and in the work of selected filmmakers.

FTV 238 Screenplay Fundamentals 3 Credits
Screenplay Fundamentals will instruct students in how to write for the screen. Students will learn how to convey story and character through the medium of film and television, how to write effective dialogue, and understand the basics of dramatic writing and scene structure.
Prerequisite: COM 131.

FTV 241 Sound Design 3 Credits
This course is an introduction to sound design and editing for film, television and game design. The course examines the use and placement of sound and music in visual media from both an artistic and technological perspective, and discusses how sound and music might be used to convey meaning, enhance and strengthen visual elements, provide narrative cues, create a sense of depth and place, focus attention on actions and provide structure and ambience to the visual. Along with covering the basics of sound recording, microphone selection and use, and mixing techniques, topics such as ADR (Automatic Dialog Replacement), Foley, sound and music synchronization and sound in post-production are covered. Numerous examples of sound design for film, television and gaming will be analyzed and discussed in class.

FTV 435 Filmmaking III 3 Credits
This is an intensive hands-on course in advanced digital filmmaking. Students will gain proficiencies in a number of filmmaking areas including production planning, aesthetics, scripting, script breakdown, camera movement, selecting and directing talent, creating scenes and sequences, visualizing action, establishing mood and conflict, as well as advanced lighting, sound and digital editing techniques. The students' use of high definition digital imaging systems as a medium for narrative cinematography will be developed and refined. In addition, students will explore how filmmaking techniques and technology can impact the visual storytelling process. Students will work cooperatively in groups, modeling the interdependent structure of professional film crews. Throughout the class, there will be an important integration of theory and practice which will enable students to produce meaningful film projects that will not only be technically effective, but strong in content and context as well.
Prerequisite(s): FTV 235.

GAM 100 Game & Interactive Media Forum 0 Credits
Game & Interactive Media Forum is a once-per-month gathering of all Game majors from across the university's different Colleges. The forum will be an opportunity for students focusing on different backgrounds to engage together in industry-related topics and skills.

GAM 120 Introduction to Game Logic 3 Credits
This course introduces students to strategies for technical implementation of digital games. Students will learn design patterns for popular genres and formats through small game development projects and work toward a final project in the format of their choice. Weekly lessons will include a mix of technical demos, level design strategies, and lab time for troubleshooting and playtesting.

GAM 150 Intro to Game Studies 3 Credits
Intro to Game Studies surveys the history of video games and gaming culture against the social and political contexts that shape and are shaped by games.

GAM 200 Game Design 3 Credits
Game Design introduces students to the basic concepts of game design, covering game rules, iterations, and playtesting. Students will work with hands-on material to develop design techniques and instincts outside of digital work spaces.

GAM 201 Game Development I 3 Credits
Game Development I introduces students to industry-standard software and the basics of user experience and collaborative game design.
Prerequisite(s): ART 150, CIS 200 and GAM 200.

GAM 290 G&IMD Portfolio Workshop 1 Credits
This course is designed to help students prepare a typical portfolio for application in the game and interactive media design fields. Focus will be placed on delivery and communication skills. The course will culminate in a graded portfolio review session.
Prerequisite(s): GAM 201.

GAM 301 Game Development II 3 Credits
Game Development II extends students' knowledge of industry-standard software, building on GAM 201 and progressing toward advanced concepts of user experience and collaborative game design.
Prerequisite(s): GAM 201.

GAM 310 Special Topics in Game Design 3 Credits
Special Topics in Game Design applies students' knowledge of game design and the development software that helps them realize their design toward specific prototyping goals. The subject of GAM 310 will rotate each semester; GAM majors must complete two semesters of 310 without duplicating topics.
Prerequisite(s): GAM 200.

GAM 401 Game Workshop I 3 Credits
Game Workshop I places students in multidisciplinary project teams. Each team will create a game prototype over the course of the semester that demonstrates each student's mastery of their area of specialization and the team's ability to work together.
Prerequisite(s): GAM 301.

GAM 402 Game Workshop II 3 Credits
Game Workshop II places students in multidisciplinary project teams and builds on skills developed in Game Workshop I.
Prerequisite(s): GAM 310.

GAM 491 Internship in Game Design 3-6 Credits
Internship in Game Design places students in industry work environments, overseen by a site supervisor.
Prerequisite(s): GAM 310.

MUS 113 Popular Music Theory I 3 Credits
Popular Music Theory I covers basic elements of music, including the reading of music notation in traditional formats as well as in audio wave form and in the visualization of standard Digital Audio Workstations. Practice in scales and chords; ear-training in rhythm, pitch, and timbre. Techniques may be applied to the student's own instrument (e.g., guitar, piano, voice)
Corequisite(s): MUS 113L.

MUS 213 Digital Composition of Popular Music 3 Credits
This course is an introduction to making music in a Digital Audio Workstation (DAW). Students learn software techniques by composing in multiple genre styles.

MUS 220 Songwriting 3 Credits
The Songwriting course is an introduction to songwriting in popular music styles. Students will learn to compose music by themselves and collaboratively. This course will develop comprehensive musicianship and compositional techniques, as well as further software skill development.
Prerequisite(s): MUS 113.

MUS 313 Digital Synthesis 3 Credits
This course continues with the software composition techniques begun in MUS 213. Students will create their own sounds through digital synthesis and incorporate those sounds into music composed in a variety of genre styles.
Prerequisite(s): MUS 213.

MUS 316 Digital Mixing and Mastering 3 Credits
Digital Mixing and Mastering is a practical skills class focusing on post-production skills in software interfaces. Students will learn how to work with multiple editing softwares and plug-in tools to achieve balanced, lively, professional mixes.
Prerequisite(s): MUS 216.

SPT 250 Introduction to the Business of Sports 3 Credits
This course is designed to introduce the student to the business of sports. Business principles, such as management, marketing, law, finance and economics will be applied to the business of sports. The course will also explore the various career opportunities in the world of sports.