GDD 101. Introduction to Game Design. 3 Credits.
This course introduces students to the practice of game design (board, card, dice, physical games), theories of game design and play, the study of the social effects of games, the role of serious games for teaching and learning and production practices in the games industry. Students learn critical analysis of games and the process of design documentation.
Offered: Every year, All

GDD 102. Drawing for Games and Animation. 3 Credits.
In this course, students learn through observational drawing basics of proportion, anatomy, weight and balance to develop characters for video games and 2D and 3D animation. Topics include approaches to stylization such as anime and graphic novels. Students use both traditional pencil and paper as well as Adobe Photoshop and other software.
Offered: Every year, Fall

GDD 110. Introduction to Visual Design for Games. 3 Credits.
This foundation course prepares students for upper-level coursework by introducing critical, analytical and problem-solving strategies for researching and developing graphics for games. Practical hands-on methods include visual research, design journals, thumbnail sketches, concept art, pixel art, storyboarding and 2D and 3D development tools.
Offered: Every year, Fall

GDD 140. Creativity and Computation. 3 Credits.
This course teaches software literacy within the visual arts and visual literacy within technology. Students develop basic coding expertise and the confidence necessary to create interactive artwork and games. The course teaches essential 21st-century skills including computational and systems thinking, along with quantitative reasoning coupled with creative problem solving and generative visual aesthetics. No previous experience with programming necessary.
Offered: Every year, Fall
UC: Fine Arts

GDD 175. Special Topics in Game Design. 3 Credits.
Courses of particular interest to game design students offered on an occasional basis. These courses have no prerequisite. See the Special Topics Bulletin on the Registrar’s website for specific course descriptions.
Offered: As needed

GDD 200. Introduction to Game Development. 3 Credits.
This course provides a practical, hands-on overview of game development. Students learn how to make games from scratch by using a game engine to code behaviors and manipulate assets. Individual game development concepts are introduced incrementally. Students are required to demonstrate their understanding of these concepts through creative project work. Some programming experience is required.
Prerequisites: Take GDD 140 or CSC 110 or equivalent college level programming course.
Offered: Every year, Spring

GDD 201. Professionalism Practice for Game Design. 3 Credits.
In this course, students delve deeper into game design principles and how they apply to games. Students critically assess game concepts, objectives, narrative structure and storyline, character, game mechanics, playability and the potential of meaningful or serious “play” for teaching and learning. Students apply the results to a variety of game design projects while learning HTML, CSS and Javascript and building a portfolio website.
Offered: Every year, Fall

GDD 202. Game Art I. 3 Credits.
This course introduces students to the software tools required to design and build 2D and 3D assets for games and animation, gain knowledge of the 3D design pipeline and begin building a portfolio website to display their best artwork.
Prerequisites: Take GDD 102 or GDD 110 or permission of the program director.
Offered: Every year, Fall

GDD 207. Digital Music Composition for Games. 3 Credits.

GDD 210 Game Lab I: Team Projects. 3 Credits.
This is the first of a two-course sequence focusing on game production, coding, prototyping and playtesting. In Game Lab I, students work individually and in teams to define and develop game concepts, research content, develop game mechanics, create game assets and build working prototypes.
Prerequisites: Take GDD 200.
Offered: Every year, Fall

GDD 211. Game Lab II: Team Projects. 3 Credits.
This course is a continuation of GDD 210. Students continue to work in teams to build working prototypes while learning about the game development process, project management, play testing and usability testing. Prerequisite may be waived with permission of the program director.
Prerequisites: Take GDD 210.
Offered: Every year, Spring

GDD 215. eSports Management. 3 Credits.
This course is designed to teach students how to recruit, retain, develop and manage eSports teams. Students also explore the eSports industry, its rise and growth, trends in the space and where the field is likely to go. Finally, students discuss the business of eSports and look at possible opportunities that may arise from the growth of this new competitive space, including impacts on student athletes and colleges, professional teams, the world of sports (including the Olympics), and sponsorships.
Prerequisites: Take GDD 101.
Offered: Every year, Spring

GDD 250. Interactive Storytelling and Narrative. 3 Credits.
Students critically analyze narrative structure and character development based on readings and game play. Students use creative writing, create interactive multimedia projects and create games that explore new emerging forms such as digital storytelling, interactive theater and virtual worlds.
Offered: As needed

GDD 290. Internship. 1-3 Credits.
Under the supervision of a faculty member and a participating private company, corporation, institution or community organization, students gain real-world experience working in the field of game design or related fields. For majors or minors in game design and development. Requires permission of the program director.
Offered: Every year, All
GDD 301. Game Design Tools and Processes. 3 Credits.
Students examine games from different perspectives and investigate how those perspectives affect the design process. Project work encourages students to consider the physical, cognitive and narrative potential in games. Students use a number of game-making tools that support these perspectives.
Prerequisites: Take GDD 202.
Offered: Every year, Spring

GDD 302. Game Art II. 3 Credits.
Students continue working with software tools required for designing and building 2D and 3D assets such as characters, costumes, props, levels, environments and worlds. Students continue adding their best artwork to their portfolio website.
Prerequisites: Take GDD 202.
Offered: Every year, Spring

GDD 303. The Art of Audio Narrative (FTM 380 EN 303). 3 Credits.
This course is about storytelling. Students learn the basics of multi-track audio recording and mixing. They write and produce fiction and nonfiction audio narratives. Each project is shared in a stimulating and mutually supportive workshop environment. Students read and listen widely to gain a sense of the history and theory of radio art. Participants also spend time identifying target audiences and looking at ways to distribute student work to the larger world of public and independent radio. Prerequisite may be waived with permission of program director.
Prerequisites: Take GDD 101.
Offered: Every other year, Fall

GDD 310. Game Lab III: Team. 3 Credits.
Game Lab III builds upon the experience of game design and prototyping gained in Game Labs I and II. Students work in teams to develop and playtest working prototypes. Prerequisite may be waived with permission of the program director.
Prerequisites: Take GDD 211.
Offered: Every year, Fall

GDD 311. Game Lab IV: Team Projects. 3 Credits.
This Game Lab provides students with an experiential learning opportunity by building a game for a client or for publication. Students work in teams to build working prototypes and manage the life cycle of the game development process including troubleshooting, playtesting, usability testing and revisions. Prerequisite may be waived with permission of the program director.
Prerequisites: Permission of instructor.
Offered: Every year, Spring

GDD 314. VR/AR Development for Games. 3 Credits.
This course is an exploration into the potentials of Augmented and Virtual Reality in play and games. Students learn the skills to design and develop Virtual Reality applications for dedicated headsets and Augmented Reality applications for smartphones in Unity.
Prerequisites: Take GDD 200.
Offered: Every year, Spring

GDD 316. Advanced Topics in Game Development. 3 Credits.
Modern games rely on a range of algorithms and mathematical techniques to generate compelling dynamic game mechanics. This course develops advanced topics through mediated examples, playtesting and collaborative projects. Students build working prototypes that leverage applied math to generate complex game mechanics. The course will review basic mathematical tools for game physics, transforms, trajectory and mesh generation. More complex behaviors and movements are addressed through algorithms for procedural generation, agents, artificial intelligence, swarms and dynamic surfaces.
Prerequisites: Permission of instructor.
Offered: Every year, Spring

GDD 350. Board Game Design. 3 Credits.
This course provides an introduction to the design of table-top and board games. Board games share many ideas with digital games but utilize different game mechanics. Designing for board games explores the practice of alternate approaches to game design, and the skills learned in this class can be applied to both. Topics include design, history, manufacturing and different genres such as classic board games, deck-building games and card-based strategy games.
Offered: As needed

GDD 370. Acting and Directing for Game Design. 3 Credits.
This course provides an introduction to the craft of directing and acting for game production. Topics include story analysis and interpretation, director’s concept, and the history and theories of directing. Students learn the basic principles of acting, including scene analysis, motivation, intention and character work. They perform exercises, monologues and scenes. Additional topics include methods of actor coaching, rehearsal techniques and working with the creative game design team.
Offered: As needed

GDD 380. The Business of Games. 3 Credits.
This course helps students gain an understanding of how to develop and run a successful video game business. Students look at existing businesses and new businesses as models and cautionary tales. Topics include developing financials, how to market a business, building a strong company culture, how to crowdfund and how to incorporate.
Offered: As needed

GDD 390. Internship. 1-3 Credits.
Under the supervision of a faculty member and a participating private company, corporation, institution or community organization, students gain real-world experience working in the field of game design or related fields. For majors or minors in game design and development. Requires permission of the program director.
Offered: Every year, All

GDD 394. History of Video Games. 3 Credits.
Video games are an interactive medium grounded in step-by-step innovation in console and computer systems combined with parallel development in software capabilities. This course examines the cultural, social and educational aspects of games and considers how they changed over time in response to market pressures, societal concerns about content and technological development. Students play and analyze historical games, learn how to write game reviews and research new phenomenon in game development.
Prerequisites: Take GDD 101 or permission of the program director.
Offered: Every year, Spring
GDD 395. Critical Game Studies Seminar (PL 395). 3 Credits.
In this course, students address topics in game studies, ludology or play theory to develop critical, conceptual and cultural understandings of narrative, meaning and identity in games. The course also addresses the design and development of serious and meaningful games and the aesthetic, social and technological implications of new emerging forms. Prerequisite may be waived with permission of the program director.
Prerequisites: Take GDD 101 or PL 101.
Offered: Fall

GDD 396. Games, Learning & Society. 3 Credits.
This course addresses the design and use of serious and meaningful games in the areas of education, health care and medicine. The use of video games for a variety of pro-social uses is rapidly expanding. In this course, students examine how games can affect learning related to health issues, and how they can be used as a tool to collect data and motivate desirable behavior changes.
Offered: As needed

GDD 399. Independent Study. 1-6 Credits.
Under the supervision of a faculty member, students pursue self-directed research and in-depth study in a subject that is not covered by the existing curriculum.
Offered: As needed

GDD 402. Game Art III. 3 Credits.
Students continue with more advanced work using software tools required for designing and building art assets. Topics include techniques of advanced 3D modeling, texturing, lighting, motion capture and animation, scene planning, virtual camera angles, rendering, editing and compositing. Students continue adding their best artwork to their portfolio website.
Prerequisites: Take GDD 302.
Offered: Every year, Fall

GDD 405. Game Audio Design. 3 Credits.
This course covers sound design for games while exploring techniques of digital sound synthesis, recording, sampling and editing. Prerequisite may be waived with permission of program director.
Prerequisites: Take GDD 200.
Offered: As needed

GDD 410. Game Lab V: Team Projects. 3 Credits.
Game Lab V and VI form a two-course sequence that builds upon the knowledge and skills of prior courses. With a focus on the process of iteration, this course extends the experience of game production, coding, prototyping and playtesting gained in previous Game Labs. Students learn the basics of agile development and how to put it into practice. For game design and development majors.
Prerequisites: Take GDD 211 and senior status or permission of the program director.
Offered: Every year, Fall

GDD 411. Game Lab VI: Team Projects. 3 Credits.
This course is a continuation of Game Lab V. At the end of the semester, teams present a working game and provide documentation of their design and development process. Prerequisite: For game design and development majors.
Prerequisites: Take GDD 410 and senior status or permission of the program director.
Offered: Every year, Spring