GAME 1110. Games and Society. 4 Hours.
Provides an historical and cultural perspective on games and other forms
of interactive entertainment. Examines the present state and future
directions of paper, card, and board games; physical games and sports;
and video games. Introduces students to current issues, experiments,
and directions in the field of game design. Through weekly lectures and
small-group labs, students have an opportunity to develop a critical basis
for analyzing game play.

GAME 1850. Experimental Game Design. 4 Hours.
Explores traditions of games, play, participation, and proceduralism in
twentieth-century art movements, including Dada, Surrealism, Fluxus,
conceptual art, the Situationists, Happenings, participatory performance
and Tactical Media, avant-garde music, and contemporary art games.
Through readings, lectures, and studio assignments, offers students an
opportunity to understand and apply key principles by creating a series of
artworks using various strategies drawn from these traditions, including
appropriation, scores, intervention, and expression.

GAME 1990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions.
May be repeated without limit.

GAME 2010. The Business of Games. 4 Hours.
Surveys a wide array of game-specific industry topics, including pitching
and development of talking points, business models and revenue
structures, studio organization and style, intellectual property, contracts,
project management expectations, project green-lighting, production
pipelines, return on investment, outsourcing, and marketing. Exploring
historical shifts and evolution of the video game market offers students
an opportunity to obtain perspective on the status of the industry and
potential growth in the economy.

GAME 2150. Programming for Games. 4 Hours.
Offers students an opportunity to build computer game components
and small complete games that explore physical principles in games,
artificial intelligence, collision detection, and particle systems while
gaining familiarity with common game engine libraries.

GAME 2200. Games and Learning. 4 Hours.
Describes the classical work on the relationship of play to learning and
real life. Focuses on how players learn in and from games. Discusses
how learning theories and principles relate to the design of entertainment
games and games for impact. Also explores how game mechanisms
can be applied beyond games such as in websites and education. Offers
students, both in individual and group assignments, an opportunity to
analyze and design game mechanisms to support learning, including
writing game reviews and developing game concepts. Culminates in
a final project in which students need to develop an analog or digital
prototype.

GAME 2355. Narrative for Games. 4 Hours.
Examines and explores the structure and aesthetics of narrative,
specifically in games. Begins by breaking down narrative into its various
component parts that include, but are not restricted to, linear/branching
narrative, emergent/inherent narrative, narrative obstacles, game pacing
and narrative clock, character objectives, protagonist/antagonist, player/
character, momentum and emotional journey, and tragic/comic elements.
Offers students an opportunity to understand each narrative component
through detailed case studies and the creation of narrative artifacts.

GAME 2500. Foundations of Game Design. 4 Hours.
Seeks to define the practice of game design within the larger context of
playful interaction design, while constantly maintaining a player-centric
approach. Unfolds the process of designing games between phases of
analysis, synthesis, and evaluation. Establishes the role of game designer
as an expert with a vision for determined player experiences and a vocal
advocate for players. Seeks to offer students a broad methodology
consisting of brainstorming methods, prototyping techniques, process
management practices, and evaluation procedures to solve a wide array
of design problems in an iterative manner.

GAME 2555. Games for Change. 4 Hours.
Offers students sound introduction to the psychological and behavioral
theories of entertainment media with the goal of implementing these
theories to the future design and evaluation of games for change.
Focuses more on the psychological, behavioral, and social aspects
of video games than on pure technical aspects. Organized around a
collection of selected readings and real-world games and discussions.
The final project is based on reflective thinking, critical evaluation, and
creative application. COMM 2555 and GAME 2555 are cross-listed.

GAME 2650. Introduction to Game Research Methods. 4 Hours.
Surveys research methods and epistemologies relevant to game
researchers, designers, and artists, including experimental studies;
analytics, formal and historical analysis; ethnography; qualitative social
research; and design research. Engages students in lectures, readings,
and game faculty guest lectures presenting practical examples of
methods discussed in the class. Seeks to familiarize students with core
literatures on games, library research, and research design through a
series of hypothetical research project drafts and the completion of a
research project using a specific method covered in the class.

GAME 2750. Games Criticism and Theory. 4 Hours.
Covers fundamental theories of art, meaning-making, expression, cultural
reflection, and criticism concerning media, games, and playful artifacts.
Assigns several papers that offer students an opportunity to choose and
apply different critical lenses to games, game criticism, and their own
gameplay experience. A long-form paper allows students to train writing
theoretically informed and argumentatively cogent critical presentations
of games and gameplay experience.

GAME 2755. Games and Social Justice. 4 Hours.
Analyzes games from a social justice perspective, encouraging students
to consider issues of social stereotyping, normalization, exclusion,
and inequity as they apply to games from all sectors of the industry.
Discusses and analyzes games using a variety of social theories from
a diverse set of fields, including gender studies, critical race theory,
and LGBTQ studies. Provides a studio setting in which students have an
opportunity to engage in critical making of playable experiences that are
based upon and deeply integrate social justice theories in their design.
GAME 2950. Game Studio. 4 Hours.
Offers an experiential learning course in which students collaborate with faculty on a project for credit, which may include research, game creation, or a combination of the two. Offers students an opportunity to co-produce a publishable, distributable, or exhibitable game and/or research paper, which can become part of the student's portfolio. Course may be taught by an individual faculty member or team-taught to explore a specific topic, such as documentary games, art games, physical interfaces, installations, historical games, live-action role-playing, etc. Offers students an opportunity to gain experience working on a real-world project, as well as being credited for collaboration with an established practitioner/researcher. May be repeated once.

GAME 2990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

GAME 3055. Playful Design. 4 Hours.
 Covers how to design for playful engagement across contexts. Surveys basic theories and findings on play in ethology, evolutionary psychology, developmental psychology, anthropology, sociology, and philosophy through readings and discussion. Through lectures and exercises, familiarizes students with traditional design areas of play (toys, playgrounds, amusement parks) and the history, theory, patterns, and methods of evoking playfulness in contexts beyond games, toys, and playgrounds. Encourages students to apply these insights into portfolio work by creating playful experience prototypes across media.

GAME 3150. Game Design Algorithms. 4 Hours.
Seeks to extend student knowledge of common algorithms used in game design. Explores issues of cross-platform coding, midscale games, networked games, dynamic content systems, and working in a team-based coding environment. Working in small groups, students have an opportunity to develop and optimize a multiplayer game over the course of the semester.

GAME 3250. Artificial Intelligence for Games. 4 Hours.
Seeks to extend student knowledge of artificial intelligence techniques used in game design. Explores finite state machines, goal-driven agent behavior, graphs, in-game scripting, path finding, and fuzzy logic. Offers students an opportunity to work in pairs to develop intelligent agents to navigate a variety of game scenarios. Combines student projects competitively and collaboratively to test the robustness of the artificial intelligence solutions.

GAME 3300. Game Interface Design. 4 Hours.
Analyzes both successful and unsuccessful game interfaces from a historical and cultural perspective. Uses interactive design assignments to offer students an opportunity to develop an understanding of game user interface design standards. Encourages students to develop innovative interface designs that support new game content models.

GAME 3400. Level Design and Game Architecture. 4 Hours.
Analyses game-level designs in a variety of genres and forms. Building upon basic drawing and design skills, students have an opportunity to develop paper prototypes and simple game "mods" in the context of story and game play. Students use computer-based tools to examine game-level architecture. Encourages students to take this elective in preparation for or in parallel to the Game Projects courses. ARTF 1122 and ARTF 1124 recommended (required for combined majors).

GAME 3700. Rapid Idea Prototyping for Games. 4 Hours.
Studies digital and nondigital prototyping techniques through weekly activities in which students build and critique prototypes around a variety of game design themes. Offers students an opportunity to build a portfolio of small proof-of-concept game prototypes over the course of the semester. Additionally, covers how to iterate on a single prototype through a semester-long project in which students have an opportunity to work individually on a larger game design.

GAME 3800. Game Concept Development and Production. 4 Hours.
Offers student teams an opportunity to conceptualize, design, document, and develop a complete game, including content, level design, user interface, and game mechanics as specified in design documents. Offers a set of brainstorming techniques. Students segment the concepts into individual systems and prototype them in an iterative manner, formally iterating over the whole game to improve the player experience. Requires students to maintain a schedule and project management documents. Results in the presentation of the complete game for critique.

GAME 3899. Topics in Game Design. 4 Hours.
Offers a lecture or studio course in game design on a topic not regularly taught in a formal course. Topics may vary from offering to offering. May be repeated up to three times.

GAME 3990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions. May be repeated without limit.

GAME 4055. Motivational Game Design. 4 Hours.
Explores what motivations drive human behavior and how design can be used to motivate behavior in games. Offers students an opportunity to learn the main research models and findings about fun, enjoyment, and motivation, as well as to explore how design patterns facilitate these engaging qualities and how to apply this knowledge in practice through readings, lectures, autobiographical research, and the co-creation of a wiki of design lenses.

GAME 4155. Designing Imaginary Worlds. 4 Hours.
Offers students an opportunity to learn to conceive, design, and convey imaginary worlds across a wide range of media. The crafting of fictional worlds has become an important skill in the media landscape, whether for video and tabletop games, comic books, novels, film, or television. Analyzes existing works in diverse genres such as fantasy, science fiction, superhero, and supernatural worlds. Explores, through creative projects, the ways in which the use of different media are suited to portray different aspects of an imaginary world.

GAME 4355. Game Scripting. 4 Hours.
Offers students an opportunity to understand the basic principles of game engines and how to control games and game engines through relatively simple scripting techniques. Examines several different game engines, including those where scripting is visual and those where scripting is textual. Studies critical concepts, including the game loop and triggering/collision events. Offers students an opportunity to propose scripts to add to games and to work in teams to devise these scripts (pair programming) and the associated presentations (proposal and completed work). Students choose game engines and scripts to implement based on critical analysis of existing games and on their own aspirations for being innovative game designers.
GAME 4700. Game Design Capstone 1. 4 Hours.
Offers the first course in a two-semester capstone sequence. Offers
students an opportunity to take on individual roles in a large-group
project, creating a complete game from preproduction through
implementation and testing. Students spend the first half of the first
semester developing a proposal and testing ideas through simple
prototypes, building on their skills from GAME 3700 and GAME 3800.
Students then have an opportunity to spend the second half of the first
semester, and all of the second semester, developing, play-testing, and
iteratively refining a multi-level game.

GAME 4701. Game Design Capstone 2. 4 Hours.
Continues GAME 4700. Offers students an opportunity to continue
developing, play-testing, and iteratively refining the multilevel game
begun in GAME 4700.

GAME 4970. Junior/Senior Honors Project 1. 4 Hours.
Focuses on in-depth project in which a student conducts research or
produces a product related to the student’s major field. Combined with
Junior/Senior Project 2 or college-defined equivalent for 8-credit honors
project. May be repeated without limit.

GAME 4971. Junior/Senior Honors Project 2. 4 Hours.
Focuses on second semester of in-depth project in which a student
conducts research or produces a product related to the student’s major
field. May be repeated without limit.

GAME 4990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions.
May be repeated without limit.

GAME 4991. Research. 4 Hours.
Offers an opportunity to conduct research under faculty supervision.

GAME 4992. Directed Study. 1-4 Hours.
Provides study for the student whose unique academic needs or interests
cannot adequately be satisfied in any of the scheduled courses of the
department. May be repeated up to three times.

GAME 4993. Independent Study. 1-4 Hours.
Offers independent work under the direction of members of the
department on a chosen topic. Course content depends on instructor.
May be repeated without limit.

GAME 4994. Internship. 4 Hours.
Provides students an opportunity for internship work. May be repeated
without limit.

GAME 4996. Experiential Education Directed Study. 4 Hours.
Draws upon the student’s approved experiential activity and integrates it
with study in the academic major. Restricted to those students who are
using the course to fulfill their experiential education requirement. May
be repeated without limit.