

GAME 490: Senior Project

Term: Fall 2017
Section: 002
Section: 001

Room: Art & Design Building 1018
Meeting Time: Friday 1:30PM – 4:10PM
Meeting Time: Friday 4:30PM – 7:10PM

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Office Hours: By Appointment (Friday)

Course Description

This course represents the capstone experience of the Game Design Major, and serves to prepare students to pursue further game education or possibly to enter the game design and development workforce. This course requires 6 credits to complete and is designed to be completed over two semesters. The first semester will result in a project being 'greenlit' and include a fully fleshed out design document and production plan as well as a demo or vertical slice of the game design. The second semester takes the 'greenlit' game and uses it as a blueprint for a fully functional game that will be developed by the student or student team and be presented to a panel of colleagues, instructors, and industry professionals at the end of the semester.

Along with the production of the game, students will analyze their designs in relation to gaming theory and historical precedence. Students will analyze their gaming methodologies and compare them to similar games in history, with the understanding that this context will help solidify the focus of their project.

The end goal of the class will be to present a fully functional game based on their design that will demonstrate the design skills they have learned and will highlight their area of study within the Computer Game Design program. For example, a student with an area of study in "Sound and Music" will create a game project that will showcase the student's work in developing sound effects, voiceover and music.

General Education Synthesis Requirement

As a Computer Game Design capstone, this course fulfills the General Education Synthesis Requirement. Games are by their nature synthesis products of several disciplines, and it is in the senior project that students are expected to demonstrate a broad array of skills learned throughout their undergraduate careers as well as focus their project toward an area of interest to the student. Computer scripting, 3D modeling, 3D animation, UI design, game audio, game music, game mechanic design, level design, interactive writing, prototyping, play-balancing, scheduling, testing, teamwork, and public presentations are all skills that will come to bear on a student's senior project. While each project will be unique in its focus, all projects will showcase several of the aforementioned disciplines.

Course Objectives

- Write, design, and develop a professional Game Design Document.
- Analyze the game design in terms of theory and historical context.
- Compose a comprehensive, itemized development schedule.
- Design, conduct and assess a prototyping process for their game design.
- Produce a fully functioning platform, PC, or mobile game.
- Present their game, game design, and process publicly to a group of peers, instructors and industry professionals.

Apply critical thinking skills in each phase of development beginning with assessment of the game concept, generating and testing design assumptions, planning and scheduling the game's development, and in preparing a presentation of their game's design as well as final product.

Team versus Solo Projects

Students may choose to work with a team of developers on their senior project or decide to develop a project on their own. Historically, students have worked with other students enrolled in the senior project. Some student teams are comprised of students both enrolled in the senior project and those who are not (either CGD underclassmen or students in the Computer Science game concentration).

The core elements of this course involve teamwork, participation and working with others. Video game development is not typically a solo endeavor, but requires being able to work as part of a team, and the prime objective of this class is to prepare students for that dynamic. Generally solo projects have a more difficult time than teams do, and teams usually develop projects that are more robust and feature-complete.

It is recommended that if you embark on a team project with other CGD Major students enrolled in the senior project, so that you share the same motivation, timeframe and requirements with your teammates. The dangers of accessing resources outside the project are that they may become unreliable and your grade and project might suffer. This has occurred in the past and it is why it is strongly recommended to choose teammates who share the same deliverable goals and responsibilities each semester. All teams will be approved by your instructor prior to development.

Project Focus

The focus of a student's senior project should function as a synthesis of what they have learned in the Computer Game Design curriculum. Game development is a multidisciplinary field, and our students often have different areas of interest and expertise. The project should be a representation of both your skills and your passion in the form of a game.

For example, if you aspire to become a character animator in the game design industry, your project should be a game which shows off your character animation above all else. Nonetheless, it may require you to do some character modeling and rigging, level design and scripting, but the primary focus will be to demonstrate your animation.

Alternatively, if your focus is on game design, your project needs to show off game mechanics, level design and scripting ability. As in the animator example above, it may require you to create some art assets, animations etc., but the focus should be on showing off the design elements in your game (whether mechanical or aesthetic).

Requirements and Evaluation

At the beginning of each class, students should be prepared to discuss and demonstrate the state of their game project or design.

The teams will formally present their progress four times during the two-semester: at mid-term and again at end-of-term.

In the first half of this two-semester course, students will develop their game design in what the game industry refers to as the “pre-production” phase of development. During this phase, the game idea will be refined, the scope will be determined, the look and feel of the game will be decided, and all necessary assets and functionality will be defined. Once the core design is complete, the student will design, conduct and assess prototypes needed for the development of this game. It is the goal of these prototypes to determine the final target feature set of the game and to test any design assumptions the student’s design may pose. The final project for this course is a presentation of the design and prototyping process along with analysis, followed by a presentation of the completed game design, accompanied by a demo or vertical slice of the game as developed via the prototyping phase.

During the second half of the two-semester course, students will focus solely on the production phase by developing the game described and prototyped from the first semester. The focus for the second semester is on “production” and “testing” phase of development. At the conclusion of the second semester, students will present a professional public presentation of their final fully functioning game.

Required Texts/Materials:

No Text – all reading and other assignments will be given in class or via Blackboard.
Access to a PC Desktop/Laptop – For project and coursework outside of class.
Access to a platform specific device – For development, testing, and presentation of project (as applicable).

Details on presentation requirements and course schedules will be available on Blackboard under Course Content.

Recommended Materials:

USB Flash Drive – 2 GB for storing and transporting project data

Google Drive Account

Grading

Grading will be based on a number of criteria based on the portion of the class being taken. In general the following will be used as a guideline for what will be evaluated.

- Participation in weekly status updates and demonstrations.
- Development of design documents, production plans and relevant plans.
- Presentation of documentation and projects.
- The final product (vertical slice or fully functional game).

For the first portion of the class, developing the game design and vertical slice, the following is a guideline for expectations on grading:

- Participation in weekly status updates and demonstrations (10%)
- Midterm Grading
 - Developing a game design treatment (5%),
 - Developing a style guide (look and feel) for the design (5%)
 - Developing an asset list/schedule (5%)
 - Developing a prototyping plan (5%)
 - Prototype development and analysis (10%)
 - Presentation of the Prototype (10%)
- Final Grading
 - The completed game design document and prototypes (20%)
 - Presentation of the vertical slice and game design document (10%)
 - The completed vertical slice of the game (20%)

For the second portion of this class, the following is a guideline for expectations on grading:

- Participation in weekly status updates and demonstrations (10%)
- Midterm Grading
 - Developing a production schedule (5%)
 - Updated Design Documentation (5%)
 - Alpha Build and analysis (15%)
 - Presentation of production process and alpha build (15%)
- Final Grading
 - Public presentation of the game design and development (20%)
 - The completed game and design documentation (30%)
 - The final game and design will be reviewed for the following:
 - Requirements met, analyzed, and results documented.
 - Design goals met and realized.

- Aesthetics / Usability / Quality Assurance.
- Teamwork / Production ethics.

Presentation is an important part of the grade. The midterm and final both require students to pitch their projects. Generally, this is done in front of the class to allow peer participation through questions and answers. As noted above, the final presentation may be given before other faculty or industry professionals. The presentations are recorded for review of content and presentation style. This footage is viewed only by the instructor and the student or group involved, who receive a copy of the footage for their own evaluation.

ACADEMIC INTEGRITY

Mason is an Honor Code university; please see the University Catalog for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

MASON EMAIL ACCOUNTS

Students must use their MasonLIVE email account to receive important University information, including messages related to this class. See <http://masonlive.gmu.edu> for more information. All digital communication with the professor must be made using your "masonlive" email account.

OFFICE OF DISABILITY SERVICES

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the ODS. <http://ods.gmu.edu>

OTHER USEFUL CAMPUS RESOURCES:

WRITING CENTER: A114 Robinson Hall; (703) 993-1200;
<http://writingcenter.gmu.edu>

UNIVERSITY LIBRARIES "Ask a Librarian"
<http://library.gmu.edu/mudge/IM/IMRef.html>

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380;
<http://caps.gmu.edu>

UNIVERSITY POLICIES

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