



Game Design

Grand Haven High School



Course Number: L61

Grade Level: 10th through 12th

Credits: 1/2 Credit

Prerequisite Courses: Students must have passed Art and Design or Introduction to Digital Art, as well as Animation.

Course Description

This course builds on the Principles of Animation to create interactive art. Several tools will be utilized to create both physical and digital games. The course primarily focuses on prototyping, 2d asset creation, some JavaScript, and level design using the GDevelop game engine. Students will build several proof-of-concept games individually while collaborating with their classmates on larger projects. These projects will focus on the game development pipeline and collaboration on larger games. Students will utilize their skillset in Photoshop and Illustrator to create assets for use in their games, as well as utilize prepackaged assets.

Course Objectives

- To foster creative thought and expression through interactive art
- To use the elements of art and principles of design in original designs
- To become familiar with and use vocabulary specific to game design
- To understand and appreciate the value of games as art
- To become familiar with, as well as, to appreciate the historical aspects of game design
- To understand and appreciate the value of critique
- To heighten perceptual awareness
- To create believable movement
- To create narrative through a new media
- To evaluate design
- To develop positive habits in development pipelines

Student Expectations

1. CLASS TIME: Students are responsible for using class time for on-task assigned activities only and for the proper use and cleaning up of their work areas, tools and equipment.

Building Behavioral Expectations

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It is our expectation that ALL GHHS students, staff and parents will ... always give their best **EFFORT** in everything that they do, work hard to be **INCLUSIVE** of each other, show **RESPONSIBILITY** in class, the hallways, cafeteria and at events, and **WORK TOGETHER** at all times!

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2. **ASSIGNMENT COMPLETION:** Students are responsible for the completion of all assignments prior to assessment.

3. **ASSESSMENTS (TESTS, QUIZZES, FINAL EXAM):** This is a project-based class and all assessments will be in the form of a project. All pieces of portfolio work will require a self-evaluation and must be turned in on time (points will be deducted if the project is turned in without an accompanying digital grade sheet). Incomplete, unsigned work will not be accepted. Late work is work that is more than one week late and will receive a lower grade unless prior arrangements are made with the instructor.

Every student is expected to participate daily in class. This includes studio work, critiques and class discussion/note taking. Students are expected to follow the rules of the studio, including etiquette and clean up. Participation, on-task use of class time and project progression will be assessed with studio grades as a part of each project. Students are responsible for the proper use/care of assigned supplies/equipment.

Communication

Email is the most efficient method for us to communicate. E-mail addresses and any other personal information will remain confidential (please submit the Parent Survey in Google Classroom to indicate that you have read the syllabus and to provide me with your contact information).

Contact information for the instructor for this course is:

moorem@ghaps.org
Mitch Moore (616-850-6111)

Grading Policy

CLASS REQUIREMENTS:

1. **PORTFOLIO:** (80%) A portfolio is a collection of art products created during class. These works will receive grades consisting of but not limited to:

1. **Creativity:** Your ideas, planning and originality
All Portfolio work will require a Resource File to be turned in by the due date:
Points will be deducted if this is not done prior to starting the assignment
2. **Level of Mastery:** Did you understand and follow directions?
3. **Technique/Craftsmanship:** How well is the work done?
4. **Portfolio Documentation:** A digital compilation of work will be turned in along with the self-assessment (digital grade sheet through Google Classrooms)

Several Capstone projects will be utilized after key units to demonstrate mastery of game design.

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2. STUDIO WORK ASSIGNMENTS: (20%) Short term assignments, research, note taking, quizzes and critiques completed in and outside of class. Sketches and/or preliminary exercises will be required before the completion of each assignment. Students will also receive a daily grade worth 10 points toward the progress, process and work completed during class.

FINAL EXAM: The final exam in this class will be a final project that is a summation of students learning from the semester and a portfolio section. 40% is the average of all their projects and 60% is the final project.

SEMESTER GRADE: The semester grade will be an average of the term grade (80%) and the final exam (20%).

REMEMBER, YOU ARE ENCOURAGED TO WORK AT YOUR OWN PACE BUT WILL BE REQUIRED TO COMPLETE ALL PROJECTS THAT ARE ASSIGNED.

Scope and Sequence

1. Intro to Game Design
 - a. Games v Interactive Art
 - b. Narrative in Games
 - c. What is fun? Learning about engagement
 - d. Prototyping Board Games
 - i. Taking Feedback
 - ii. Design Cycle
 - iii. Rapid prototyping
 - iv. Mechanisms
 - v. Constraints
2. UNIT 0
 - a. Intro to Game Design and Analysis
 - b. Intro to Game Design Documents
 - c. Intro to the Unity Editor
3. UNIT 02
 - a. Critical Thinking in Games
 - b. Game Design Document Development
 - c. Basic Unity Functionality
4. UNIT 03 - Infinite Game
 - a. Skill Building and Reinforcement
 - b. Game Design Document Development
 - c. Intermediate Game Analysis
5. UNIT 04
 - a. Stories in Games
 - b. Project Management

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- c. Terrain and Tilesets
- 6. UNIT 05 - Infinite Runner
 - a. Scripting Fundamentals
 - b. Systems Thinking
 - c. Capstone Development
- 7. UNIT 06
 - a. Assets and Interactions
 - b. Game Design Document Development
- 8. UNIT 07 - Platformer Game
 - a. Animation
 - b. Physics in the Unity Engine
 - c. Capstone Work
 - d. Player Interaction
- 9. UNIT 08 - Action Adventure Game
 - a. Capstone Development
 - b. Level Design Activities
 - c. 2D Level Design
- 10. UNIT 09
 - a. Basics of Cameras
 - b. Document Updates
 - c. Game Design Document (GDD) Entry
- 11. UNIT 10
 - a. Sound and Audio Design
 - b. GDD Development
- 12. UNIT 11 - Final Project introduced
 - a. Designing User Interfaces
 - b. The Build Process
 - c. Game Design Document Updates
- 13. UNIT 12
 - a. Intermediate User Interfaces
 - b. Intermediate Animation Tools and Skills
 - c. Project Check-In
- 14. UNIT 13
 - a. Debugging
- 15. UNIT 14
 - a. Release
 - b. Versioning

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