Computer Game Platform Analysis
GAME330-001 – Fall 2019 – MW 12:00 pm to 1:15 pm – AB 1018

Instructor: Rob Dieterich
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Office: AB 2021
Office Hours*: MW 3:30 pm – 5:00 pm

* Other times by appointment (Tues., Thurs., and Fri. are best for appointments). You may also meet me online by appointment via Collaborate Ultra, Discord, or Skype. The best way to schedule an appointment is via email.

Mason Mission Statement
Mission-Who we are and why we do what we do
A public, comprehensive research university established by the Commonwealth of Virginia in the National Capital Region, we are an innovative and inclusive academic community committed to creating a more just, free, and prosperous world.

Mason Game Design Mission Statement
The Mission of the Computer Game Design Program at George Mason University is to prepare students for employment and further study in the computer game design and development field, doing so with a curriculum designed to reflect the gaming industry’s demand for an academically rigorous technical program coupled with an understanding of the artistic and creative elements of the evolving field of study.

Catalog Description
Current and prototype consumer gaming platforms and consoles. Analysis will include conversion, transposition, and porting game media among most commercially produced platforms for analysis and comparisons.

Course Overview
In this course, you will gain a deeper understanding of the various platforms available for consumer games. Through research and hands-on projects, you will learn how to distinguish features of various platforms in terms of their capabilities, markets, publishers, and the consumer culture that surround them. You will also gain a working knowledge of the Unity game engine as required to complete many of this course’s projects.

Students of this course are REQUIRED to sign up for GAME331 (1 credit lab).
Student Learning Objectives
Upon completion of this course, students will:

- Use common hardware terms fluently (CPU, GPU, RAM, etc.)
- Design and implement games that showcase features / mitigate limitations of established hardware capabilities
- Enumerate features provided by the firmware / engine on which their games will be implemented
- Design and implement games that showcase features / mitigate limitations of established firmware / engine features
- Identify and articulate the wants and beliefs of game companies and audiences with regards to the games they publish / play
- Design and implement features that reflect the desires and beliefs of target game companies and player audience

Required Texts
There’s no required text for this course. Necessary materials will be distributed online if applicable.

Required Software
Students will be required to have existing knowledge of the following software to the extent that they can efficiently develop games and game assets.

Unity game engine V. 2018.x or newer: http://www.unity3d.com

Art asset creating software such as Adobe Photoshop and/or Illustrator.

Sound design/creation software such as Audacity.

Writing and presentation software such as that found in MS Office (Word, Powerpoint, Excel, etc.) or on Google Drive.

Course Structure
This course is centered around in lectures and in-class exercises as well as several projects that you will be assigned over the course of the semester. These projects range in type from game design documentation to researched presentations to game prototypes. Most of the projects involve group work. In general, groups will be randomly assigned so you get practice working with various people and skillsets. For the final project, you will be allowed to choose your group.

The companion GAME331 lab course will run you through a collection of original Unity exercises designed to acquaint you with a variety of game development topics in a hands-on manner. The lab assignments are individually graded and are independent of the GAME330 projects. In other words, you do not need to be in the same section of GAME331 as you are in GAME330.

Grading & Assessment Overview
Your grade in this course will be based on the following factors:
15% Esoteric Hardware Game Design One-Pager (Individual assignment)
15% Game Engine Tutorial (Individual assignment)
20% Midterm Project (Group project involving creating a working game prototype)
15% Competition Research Presentation (Individual assignment)
25% Final Project (Group project involving creating a working game prototype)
10% Attendance*

* Note that, if you are having trouble in class, need an extension on a given assignment, or circumstances outside of class are affecting your ability to do the work, talk with me about it sooner than later. In general, we can work something out.

Letter grades are assigned according to the following scale:

A: 90% - 100%
B: 80% - 89%
C: 70% - 79%
D: 60% - 69%
F: 0% - 59%

Academic Integrity
Students must be responsible for their own work, and students and faculty must take on the responsibility of dealing explicitly with violations. The tenet must be a foundation of our university culture. See: http://oai.gmu.edu/

Honor Code
Students must adhere to the guidelines of the George Mason University Honor Code. See: https://oai.gmu.edu/mason-honor-code/full-honor-code-document/

MasonLive/Email (GMU Email)
Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account. See: http://masonlive.gmu.edu/
Patriot Pass
Once you sign up for your Patriot Pass, your passwords will be synchronized, and you will use your Patriot Pass username and password to log in to the following systems: Blackboard, University Libraries, myMason, Patriot Web, Wireless, and the Virtual Computing Lab. See: https://password.gmu.edu/index.jsp

University Policies
Students must follow the university policies. See: http://universitypolicy.gmu.edu/

Responsible Use of Computing
Students must follow the university policy for Responsible Use of Computing. See: http://universitypolicy.gmu.edu/policies/responsible-use-of-computing

University Calendar
Details regarding the current Academic Calendars. See: http://registrar.gmu.edu/calendars/index.html

Students with Disabilities
Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester. See: http://ods.gmu.edu/

Religious Holidays
A list of religious holidays is available on the University Life Calendar page. See: http://ulife.gmu.edu/calendar/religious-holiday-calendar/. Any student whose religious observance conflicts with a scheduled course activity must contact the Instructor at least 2 weeks in advance of the conflict date in order to make alternative arrangements.

Student Resources
University Libraries
University Libraries provides resources for online students. See: http://library.gmu.edu/distance

Writing Center
The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing. See: http://writingcenter.gmu.edu/. You can now sign up for an Online Writing Lab (OWL) session just like you sign up for a face-to-face session in the Writing Center, which means YOU set the date and time of the appointment!

Counseling and Psychological Services
The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services
(e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance. See: http://caps.gmu.edu/

**Family Educational Rights and Privacy Act (FERPA)**
The Family Educational Rights and Privacy Act of 1974 (FERPA), also known as the "Buckley Amendment," is a federal law that gives protection to student educational records and provides students with certain rights. See: http://registrar.gmu.edu/privacy

**Disclaimer**
In this class, I reserve the right to show a broad range of course materials, some of which assume the audience to be adult in age and demeanor. Should you at any time in the course of the class feel offended by something you have seen or heard, we would appreciate you staying to be part of a dialogue. If you feel that you cannot stay, remove yourself from the classroom as discretely as possible. You may be asked to report on your response.

**Course Schedule**
Refer to Blackboard for important course due dates.