CS 4423 – Fall 2018
Game Development

Professor: John Quarles
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Class Time: TR 4-5:15
Location: NPB 1.238

Office Hours:
- TR 1:30-2:30
- By appointment (email or call)

Course Description:

A study of the major topics in game development, such as game mechanics, scripting, user interfaces, animation, asset management, and physics, with a focus on team-based development practices.

What is this course, and who is it for?

This course is directed towards undergraduate students who wish to learn the basic concepts of game development through lectures, in-class activities, individual assignments, and team-based projects. By the end of the course, you will be able to:

- Develop interactive games from concept to execution in Unity3D (unity3d.com), a professional game engine geared for rapid game development across multiple platforms, such as PC, Mac, Linux, Web, Android, IOS, and consoles.
- Understand the practice of team-based game development, including source control(e.g., git) and project management
- Understand the underlying components that make up a versatile game engine, including scripting, rendering, physics, animation, mechanics, and interaction.

Prerequisites:

CS 3343.

Required Text:

none

Grading:

- 40% individual programming assignments (3 assignments)
- 50% final project (team game project)
- 10% class participation (almost every class there will be problems to solve in groups to stimulate your thinking - 5% of this may be to participate in research studies).

Workload:

Programming assignments and especially team projects can be *very* time intensive. The compensation is that it's fun! It is STRONGLY suggested that you experiment and ask questions. Programming assignments can vary from 20+ hours *per* assignment. The final project will take a lot more hours than the assignments. I find that students end up putting in a lot more hours, going beyond the project requirements, just because they want to make their game really awesome.

However, you must also be prepared that just pouring in time is not the best method to a good grade. You must effectively use your time, start projects early, and pay close attention to the assignments.

Equipment and Facilities:

The department has a variety of Linux and PC workstations available for student use to complete the programming assignments and projects. You are can work on these projects on your own machines too, using any compatible system (Windows, Macs). The development environment we will use in class will be Unity3D and Visual Studio IDE. For source control we will use git. The software runs on Windows, and Mac and can be developed where different team members use different OSs.

Class Policy

Cheating, copying code, etc:

Working together is encouraged, but I urge all students to please use *intelligent* discretion. High level questions, syntax topics, and algorithms can be discussed, but copying code will NOT be tolerated. If you are used to relying on others to help you slide through a class, unfortunately, the assignments quickly grow too complex, and you'll find it a slippery slope to overcome. The penalty for a first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all the cases, the course grade is reduced to "F". Students are expected to report cases of academic dishonesty to the course instructor immediately. In other words: DO NOT CHEAT!!!! It just isn't worth it.

Email and Blackboard Learn– Course information will be disseminated through email. Please check your email at least once a day to keep up to date on any last minute course information. The **official** email address for the course is your UTSA account email. If you do not routinely check it, it is **your** obligation to have it forwarded to whatever email account you do regularly check.

Programming Assignments:

LATE WORK will be -10% per day. Maximum of 5 days late.

Attendance:

Attendance is REQUIRED since your participation grade depends on it. If you are sick, please contact me, and I will gladly work out a way for you to catch up.

Concerns, Questions, and Comments:

If you have problems, please contact me, and we can work things out. I'm a rational person, for the most part, and my primary goal is to have students develop a fundamental understanding and fervor of excitement for game development.

Suggestions for success:

- Start assignments early (2 hours a day for 5 days is much more effective than 10 hours the day before it is due)
- Ask lots of questions. If you are uncomfortable with asking in front of the class, please talk to me after class or during office hours. Trust me, you will not be bothering me! Asking me a question could save you from hours of googling.
- Have fun and experiment. Go all out. Who knows what you'll make, discover, or explore!

Course Webpage: Schedule, slides, grades and assignments will be managed through Blackboard Learn

Miscellany – please turn off all cell phone ringers. Not doing so repeatedly will incur an embarrassing 'talking-to' after the class. I also suggest peer pressure to help with repeat offenders.

Common syllabus information link: http://provost.utsa.edu/syllabus.asp