

Syllabus

Game Development - COMP 475

3:00 – 4:15 MW Science 207

Spring 2018

Instructors: Dr. Frank McCown
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Office Hours: Science 208: 2-3 pm MW, 2-5 pm TRF or by appointment

Course Description

This course is an introduction to the theory and practice of video game design and development using Unity and C#. Topics include: game design, prototyping, game physics, collision detection, and game AI. Prerequisites: COMP 245 and 345.

Required text: *Introduction to Game Design, Prototyping, and Development 2nd Edition* by Bond (2017) ISBN: 978-0134659862

Student Learning Outcomes

At the end of this course, the student will be able to...

1. Identify significant historical events in game development.
2. Identify the important elements of a playable game.
3. Create a prototype of a game.
4. Design and develop Unity applications in C# that meet specific requirements.
5. Explain how AI is employed in games.

Participation

Many class meetings will involve working in pairs or teams on in-class activities. Your participation score, which accounts for 5% of your overall grade, relies on your attendance and participation in the activities. Any unexcused absence after one absence will subtract 1% from your participation score. If your participation score drops past zero, you will be dropped from the course with an F.

Exams

Two take-home exams will be given: a midterm and a final exam. Students will work on the exams *individually* and will not consult each other or other individuals about the exam.

Projects

Several projects will be assigned throughout the semester. You should expect to spend a significant amount of time on each project.

The first few projects will be completed in teams of two that are assigned by the instructor. The final project will be completed by teams of your own choosing. Pair programming may be used but is not required. Teams will use git for version control and will make their code available in private repositories on GitHub.com.

Reading Quizzes & Homework Assignments

Reading quizzes and homework assignments will be assigned throughout the week. The reading quizzes will be available on Canvas and must be completed before the class period when the reading assignment is due. Quizzes are open book, but they must be completed *individually*.

Homework assignments must be completed individually. Typically, homework will be posted on Easel.

Extra Credit

1. The McChallenge: **1%** will be added to your final grade for the completion of a program which will be made available to you later in the semester. The program will be due the Friday before final exams. You can skip the program and still get the 1% added to your final grade if you beat me in a game of basketball, tennis, racquetball, Halo, chess, Trivia Pursuit, or any other sport/game that I know how to play. If you lose, you still may complete the program to get your 1%. Only one challenge per semester, and all challenges must be made *before* the final week of class. Come by my office to schedule a time to play.
2. Giving Blood: Donating at the Red Cross blood drives will earn you **0.2%** added to your final grade each time you donate. Donate as many times as you'd like, and give me a signed note confirming your donation each time you donate.

Grades

Final grades will be computed as follows:

Participation:	5%
Exams:	30%
Projects:	40%
Homework & Quizzes:	25%

Standard letter grades: A = 90-100%, B = 80-89% C = 70-79%, D = 60-69%, F = 0-59%

Late work: A maximum of 10% will be taken off *each day* (not each class period) an assignment is late, up to 50%. Every day is counted, including weekends. Nothing more than 1 week late will be accepted.

Final grades are not rounded unless the student has given significant effort which is evidenced by regular attendance, completion of nearly all homework assignments, significant effort on projects, etc.

Miscellaneous

1. To be successful in this course, be prepared to spend **at least two hours outside of class** for every hour in class reading, completing tutorials, meeting with your team, and working on your project. This works out to about 9 hours a week.
2. You must check Canvas **regularly** for announcements and Easel for class assignments. Canvas is the place to ask questions outside of class and give help to others on homework and projects.
3. You are expected to hold to the **highest standard** of personal conduct and **integrity**. Cheating in all its forms is inconsistent with Christian faith and practice and will result in sanctions up to and including dismissal from the class with a failing grade. Homework and quizzes should be completed *individually* (not in teams or pairs), and it should be *your* work, not the work of someone else. One thing that you should *never do* is allow someone to see your source code as this often leads to cheating. Come by during office hours (or we'll arrange a time) for assistance on programs. Also see my [Plea for Integrity](#).

"Whatever you do... do all to the glory of God." - 1 Corinthians 10:31

4. Please adhere to the **dress code** as spelled out in the Student Handbook, meaning shorts are not to be worn in class, and men should remove caps while in class. Please wear shoes to class (flip flops are OK).
5. Use the lab computers only for classwork. Email, Facebook, playing games, etc. are not allowed during class. If you are instructed to give your attention to me, turn your monitor off and stay off your computer.
6. Silence your cell phones, and **put them away**. It is very distracting to me and those around you when you text in class.

If you ever need assistance in this class or anything else, please don't hesitate to come by my office or give me a call.

Assessment

Harding University, since its charter in 1924, has been strongly committed to providing the best resources and environment for the teaching-learning process. The board, administration, faculty, and staff are wholeheartedly committed to full compliance with all criteria of the Higher Learning Commission of the North Central Association of Colleges and Schools. The university values continuous, rigorous assessment at every level for its potential to improve student learning and achievement and for its centrality in fulfilling the stated mission of Harding. Thus, a comprehensive assessment program has been developed that includes both the Academic units and the Administrative and Educational Support (AES) units. Specifically, all academic units will be assessed in reference to the following Expanded Statement of Institutional Purpose: **The University provides programs that enable students to acquire essential knowledge, skills, and dispositions in their academic disciplines for successful careers, advanced studies, and servant leadership.**

Assessment of the knowledge, skills, and dispositions of each student for the purpose of assigning a letter grade at the completion of this course will be based on the projects, homework assignments, and exams that were described previously in this syllabus.

Students with Disabilities

It is the policy for Harding University to accommodate students with disabilities, pursuant to federal and state law. Therefore, any student with a *documented disability* condition (e.g. physical, learning, psychological, vision, hearing, etc.) who needs to arrange reasonable accommodations, must contact the instructor and the Disabilities Office at the *beginning* of each semester. (If the diagnosis of the disability occurs during the academic year, the student must self-identify with the Disabilities Director *as soon as possible* in order to get academic accommodations in place for the remainder of the semester.) The Disabilities Office is Room 205 of the Student Center, telephone, (501) 279-4019.

