**24378 CIST 1422 GAME DESIGN & PROGRAMMING**

Thursday 6:00PM - 8:30PM Swarts 236

**Course website:** CourseWeb (<http://courseweb.pitt.edu>)

**Professor:** Jeremy Callinan

Office hours: Thursdays 8:45-10:00 on site and online, ([Jeremy.callinan@gmail.com](mailto:Jeremy.callinan@gmail.com))

**Texts:**

### Introduction to Game Design, Prototyping, and Development: From Concept to Playable Game with Unity and C#

By: Jeremy Gibson

[**http://proquest.safaribooksonline.com/book/programming/game-programming/9780134659909**](http://proquest.safaribooksonline.com/book/programming/game-programming/9780134659909)

Unity 2017 2D Game Development Projects : Create Three Interactive and Engaging 2D Games with Unity 2017

By: Francesco Sapio and Lauren S. Ferro

[**https://ebookcentral.proquest.com/lib/pitt-ebooks/detail.action?docID=5254601&pq-origsite=primo**](https://ebookcentral.proquest.com/lib/pitt-ebooks/detail.action?docID=5254601&pq-origsite=primo)

First day of class I will introduce myself, and we’ll go around and learn a bit about everyone. This will be your favorite part of the class.

**Syllabus:**

Subject to change, but this is the general idea.

**Course format:**

***Every week will include the following sections (excluding exam weeks):***

We will begin with a short (5-10 minute) review of material presented the previous week. You are expected to read the section of the book mentioned at the end of every week, and/or I will post podcasts and/or presentations. We’ll discuss the topics for that week (roughly ½ hr), with you asking questions as necessary (and appropriate, hopefully). We will also have labs/homework assigned from the book.

**Course Objectives:**

This is a project-oriented course on game design and game programming. Students will work to design, implement and test a three-dimensional game with interactivity, animation, sound, and networking capabilities utilizing the Unity game engine. Prerequisite: CIST 0265

**Lesson Plan**

**Note: it looks like you have a ton of reading to do, but don’t fret - many chapters are very short, and all the prototypes are step by step tutorials that allow you to develop many different types of games.**

| **Week** | **Topic** | **Homework (will include other homework assigned in class)** |
| --- | --- | --- |
| **1** | Introduction to Unity, C#, Goals for the semester, and VR equipment. | read Chapter 1, review Unity examples and Chapter 28: Prototype 1 |
| **2** | Game Design Theory Pt 1 | read Chapter 2 and 3,Chapter 29: Prototype 2 |
| **3** | Game Design Theory Pt 2 | read Chapter 4,5 and 6, Chapter 30: Prototype 3 |
| **4** | Game Designing and Prototyping | read Chapter 7,8, and 9, Exam 1 |
| **5** | Game Testing and Working with the Player | First demo app |
| **6** | Getting in to the Game Industry and the Unity Environment | read Chapter 10,11,12 and 13, Chapter 31: Prototype 4 |
| **7** | C# in Depth, Variables, Loops, and Lists | read Chapter 14,15,and 16, Chapter 32: Prototype 5 |
| **8** | C# in Depth Pt. 2, Functions, Debugging, Classes and Object­ Oriented Thinking | read Chapter 17-­22, Chapter 33: Prototype 6 |
| **9** | Agile Mentality, Prototype 7 | read Chapter 23­-26, Exam 2 |
| **10** | All Game Development in Class | read Chapter 27, Chapter 34: Prototype 7, First Game Prototype Due |
| **11** | All Game Development in Class | read Chapter 13, read Chapter 14 |
| **12** | All Game Development in Class | None |
| **13** | All Game Development in Class | Final Game Prototype Due |
| **14** | Project Presentations: In­Depth Game Programming Analysis | Exam 3 |
| **15** | Review, fixing any final bugs/development in class | None |
| **16** | **Final Game Presentation** | None, Final Exam |

**GRADING**

| Exams | 15% each (60%) |
| --- | --- |
| Final Game | 20% |
| Homework Assignments | 15% |
| Presentation/Paper | 5% |
| Bonuses (Extra credit) | 5% |
| **Total** | 105% |
|  | 100% is highest possible |
| **Grades are on traditional A+- scale - e.g. A+ - 97>, A 96-94, A- - 93<** | |

**Class Policies**

**NOTE: ALL OF MY POLICIES are superseded and overrode by Pitt’s policies if in conflict.**

1. I will not have questions on exams and quizzes that I have not talked about directly, or are not in the book explicitly. I will not include trick questions that are out of left field. That is not fair to you.
2. All persons are responsible for the coding of their own program and writing of their own assignments. Copying is plagiarism and will be dealt with. If you take an open source project and attempt to crib the whole work as your own, I will be able to tell. Remember this for your other classes.
3. If you miss any exams, and I have no notice, you will receive a 0 for that exam. However, if you have a legitimate conflict with a scheduled exam, arrangements can be made to take it some other time and such arrangements MUST be made prior to the original exam date. Same for the final.
4. If you miss a day of class, it is your responsibility to obtain the notes for that day. Attendance is mandatory – there will be quizzes and homework every week. I will have some items online, but I am not your secretary.
5. I am not planning on providing opportunities for extra credit work beyond the 5 points listed. It’s been my experience that those who ask for extra credit work haven’t even done the required work. If you have a bad grade on an assignment or exam, put your efforts towards the remaining work that must be done. High scores in later assignments and exams can offset lower scores in earlier work and I WILL take that into account if appropriate.
6. **I will be taking attendance in class. Missing more than one full class is worth 2 points off your final grade without a valid excuse. Again if there is a legitimate reason that is OK. Being tired or engrossed in WOW/Facebook/Google+/Twitter/WeChat/Snapchat/Instagram/etc is not legitimate.**
7. Everything is optional – even passing.

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**P.S.**  
**Student Disability Statement:**

If you have a documented learning, physical or emotional disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Disability Resources and Services coordinator, Carma Horner ([clh71@pitt.edu](mailto:clh71@pitt.edu), 202 Hanley Library, 814-362-7609), as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

**Academic Integrity Statement:**

Members of the University community, both faculty and students, bear a serious responsibility to uphold personal and professional integrity and to maintain complete honesty in all academic work. Violations of the code of academic integrity are not tolerated. Students who cheat or plagiarize or who otherwise take improper advantage of the work of others, face harsh penalties, including permanent dismissal. Incidents of forged signatures that are associated with any academic endeavor at Pitt-Bradford, in addition to being a criminal offense, are viewed as violations of academic integrity. The academic integrity guidelines set forth student and faculty obligations and the means of enforcing regulations and addressing grievances. Violations of academic integrity will be tracked by the Dean of Academic Affairs. Refer to the Pitt-Bradford Student Handbook for general guidelines on academic integrity. Copies of the complete Guidelines on Academic Integrity are available in the Office of the Dean of Academic Affairs (232 Swarts Hall.)

The Following links may be useful:

The Student Handbook:

<http://www.upb.pitt.edu/studentactivities/>

The University Library System’s academic integrity resources:

<http://library.pitt.edu/other/files/IL/pl2/plagiarism.htm> (Only works with the Firefox browser)

The Provost’s sites on academic integrity:

<http://www.provost.pitt.edu/info/ai1.html>

**Teaching Surveys**

Students in this class will be asked to complete a Student Opinion of Teaching Survey. Surveys will be sent via Pitt email and appear on your CourseWeb landing page during the last three weeks of class meeting days. Responses are confidential and I don’t see results until after final grades are posted. Please take time to thoughtfully respond, your feedback is important to me.

<http://www.teaching.pitt.edu/omet/faculty-information/>

**Class Cancellation Procedures:**

There may be times during the semester that one of your classes may need to be canceled. Here's what we'll do to keep you notified:

o When possible your professor who canceled the class will **email students** informing you of the cancelation.

o If the faculty member cannot email students the division administrative assistant will email you.

o Each division administrative assistant will also **post a notice** on the classroom door to inform students of cancelations.

Please bear in mind that sometimes emergencies or unforeseen circumstances may prevent timely notification --- but all possible efforts will be made to ensure that you are informed in a timely manner.

**Emergency, Evacuation, and Fire Safety Procedures:**

Please review the most up to date policies and procedures in the Annual Security and Fire Safety Report:<http://www.upb.pitt.edu/secbro.pdf>

Some **things you can do** to make sure you know when a class has been canceled:

o Check your Pitt email before you leave for class

o Check [CourseWeb](http://courseweb.pitt.edu/) for any possible notifications

o Make sure your contact information is up-to-date in [MyPitt.edu](https://my.pitt.edu/)

o Register for Pitt's [Emergency Notification Service](http://www.technology.pitt.edu/portal/emergency/emergency-notification.html)

Contact a division administrative assistant if you suspect your class may be canceled.

o  [Behavioral & Social Sciences](http://www.upb.pitt.edu/bssd/)- Brenda Brandon 362-7620

o  [Biological & Health Sciences](http://www.upb.pitt.edu/bhsd/)- Laurie Dennis 362-7640

o  [Communication & the Arts](http://www.upb.pitt.edu/cad/)- Jenifer Spencer 362-7590

o  [Management & Education](http://www.upb.pitt.edu/med/)- Nancy Kloss 362-7561

o  [Physical & Computational Sciences](http://www.upb.pitt.edu/pcsd/)- Janet Shade 362-7560

# Bias, Discrimination, and Harassment Reporting:

The faculty and staff at Pitt-Bradford are committed to supporting our students and seeking an environment that is free of bias, discrimination, and harassment. If you have encountered any form of bias, discrimination, or sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the University. If you speak with a faculty or staff member about an incident of misconduct, that faculty member is required to notify the Title IX/Affirmative Action Officer, Christy Clark (Hanley Library, 2nd Floor; [clclark@pitt.edu](mailto:clclark@pitt.edu); 814-362-5121) regarding the incident. Ms. Clark will then assist you in understanding all of your options and in connecting you with all possible resources on and off campus. If you wish to speak with a confidential source, contact the Counseling Center at 814-362-5272. For more information, please visit<http://www.upb.pitt.edu/oaadi/>.

**Online tutorials for CourseWeb are available at:**<https://www.etskb-stu.cidde.pitt.edu/>

**Panopto Lecture Capture:**

The University of Pittsburgh at Bradford has contracted with Panopto to provide lecture capture services. Each classroom is equipped with the ability to record both the computer screen and classroom audio, including student interaction with the instructor. Instructors are not required to use Panopto. **Any student not wishing to be recorded must inform their instructor in writing at the earliest possible convenience.** Recorded lectures are provided for student use only and are the property of the instructor of the course and the University of Pittsburgh. Recorded materials may not be duplicated, reproduced, or shared without the express written consent of the instructor.

**Classroom Community and Civility:**

Every student brings to the classroom a unique point of view. Everyone has different experiences and backgrounds. We tend to think and learn in our own way, based in part on our own social and cultural background. Therefore, we have all formed opinions and perspectives that may or may not be shared by others. However, we should all treat each other with respect and decency. In this course, we will create an environment in which people of all identities are encouraged to contribute their perspectives to academic discourse. Please realize that we may look at controversial topics that can provoke strong responses and may be highly political, personal, or emotional for some participants. Come to class prepared to conduct yourself with civility, respect, and integrity, and help create a safe space for discussions that are intellectually rigorous and mature.

To establish a comfortable learning environment, we must have mutual respect and civility. This includes coming to class on time, not disrupting the class with cell phones or pagers, and discussing things in an academic, rather than a personal manner. While in class, don’t talk, read non-course material, listen to headphones, or catch up on sleep. Please don’t start packing up when there is still time left as it won’t get you out any quicker. Let’s all be well-mannered, kind to one another, have fun, and learn! Below are some steps we can take in helping to foster a healthy classroom community:

1. Please use “I” statements – you can only speak from your personal experiences, not as a representative of a group.

2. Please respect other students’ preferences regarding the name and pronouns by which they would like to be referred and strive to utilize inclusive language.

3. Please do not be judgmental regarding others’ opinions and perspectives.

4. Please approach the course content in an academic, scholarly manner.

5. Please create an atmosphere of mutual respect and be considerate of others’ feelings.

6. Please work to develop an understanding of different points of view.

7. Please have an open mind and reserve the right to change your mind.

8. Please be patient with each other and yourself.

**General Statement of Student Responsibilities:**

“As a student at Pitt-Bradford, you have been given the opportunity to study and earn your University of Pittsburgh degree. As a university that takes teaching and learning seriously, Pitt-Bradford prides itself on being a “community of learners.” By this, we mean that all of us – students, faculty and staff – take active roles in the teaching and learning process. One cannot be a passive learner at Pitt-Bradford.”

In addition to the requirements as outlined for this particular course, as a member of the faculty responsible for carrying out the “community of learners” mission, I understand you as a Pitt-Bradford student to have the following responsibilities:

1. While faculty and academic support personnel are readily available to teach guide and assist you, the primary responsibility for learning and your education is yours.

2. While all faculty, academic advisors, and academic support personnel are available to assist you, it is your responsibility to communicate with your advisor and/or course instructor when necessary, and it is your responsibility to be familiar with all relevant university policies and processes.

3. While many students must maintain multiple responsibilities, including work and family, it is your responsibility to make academics – to the greatest degree possible – your highest priority.

4. While a full university experience should include cultural, social and recreational endeavors, it is your responsibility to manage your time such that as a rule, several hours of work outside the classroom are available for each hour of class time.

**Policy regarding the recording of lectures:**

Students should ask permission before they record any lectures or presentations (delivered by you or by others).

**Severe Weather Policy**

Pitt-Bradford’s general severe weather policy is to remain open in all but the most extreme circumstances. Individuals must make their own decision whether or not to come to class or report for work. In the past, faulty have been understanding when students miss class because of severe weather. Faculty are expected to continue this practice, and to not penalize students who are unable to travel to campus due to severe weather conditions. All university faculty, staff, and students are urged to use their own discretion in deciding whether they can safely commute to class or to work.