

Bergen Community College
Computer Science, Engineering and Information Technology
Course Syllabus

Course Title:

GAM-218 Game Development 3D I

Credits/Hours:

3 credits/2 hours lecture, 2-hour lab.

Prerequisite:

INF-103 Introduction to Programming (Python) or by permission of Academic Department Chair

Course Description:

This is a capstone course in which students work together on teams to produce an original, industry quality game that is presented at the end of the semester. From concept to playtesting, teams will follow a game production process and produce design, planning, testing and user documentation. Original artwork and audio will be incorporated and programming concepts will be applied.

Textbooks and Supplies:

Textbook will be provided.

Student Learning Objectives	Assessment Measures
1. Create an original, industry-quality game as part of a team-based project	Assignment
2. Produce process documentation to support the design, development and testing of the game.	Assignment
3. Create a resume and continue to develop a portfolio.	Assignment
4. Present ideas and products to an audience.	Assignment
5. Perform tests and provide feedback as part of the development process	Assignment

College Competencies:	
COMMUNICATION	4
TECHNOLOGICAL AND INFORMATION FLUENCY	1-5
INTERPERSONAL SKILLS	1
APPLIED KNOWLEDGE	1
CREATIVITY AND AESTHETIC APPRECIATION	1, 4

Course Content:

See course outline

Assessment:

An average of 60% from combined assessment measures is required to demonstrate proficiency in course material.

Exams and Projects

70%

Assignments

30%

Quizzes and Labs (Instructor Discretion)

Bonus Points

Quizzes:

There may be several quizzes, each worth 10 points, given at the beginning pre-selected classes. The quiz material will be based upon the prior lectures and labs, homework, and/or the reading assignments. A quiz cannot be made up if missed. A student entering class late, after a quiz has begun, will not be entitled to extra time to complete the quiz. Students entering class after a quiz is completed will not be permitted to take the quiz and a zero grade will be assigned.

Testing:

Students **are required** to take examinations on the day and time they are scheduled. If special circumstances require a test schedule adjustment, this must be **worked out in advance** with the instructor. If a student misses an exam (except for prearranged circumstances with the instructor) a zero grade will be assigned.

The instructor can be reached by **telephone** (see course outline for appropriate phone number), **e-mail, or a written note** can be left in the Divisional Office (during the day) B-302 or in the Adjunct Office S-107. If there are extreme circumstances (documentation may be required) that prevent a student from taking a test or an exam according to the published schedule, the student should use one of the above options to contact the instructor before the next class. An arrangement for a special testing schedule is solely at the **discretion of the instructor**. A student who waits for the next class session to speak with the instructor will not be accommodated with a special test schedule.

The use of electronic devices during exams is prohibited. Any student using an electronic device during an exam (unless directed to do so by the instructor) will receive a 0 for the exam.

Projects, Assignments, Laboratory Work:

Assignments are hands-on productions that show the instructor that the student understands concepts presented in class and in the readings and can competently use specified software to apply specific concepts.

It is anticipated that students will spend at least 4 hours per week perfecting their skills and completing their assignments and homework. Some assignments are required for grading. They must be submitted on the assignment due date, and **cannot be handed in late**. Acceptance of late assignments is solely at the **discretion of the instructor**.

Some assignments are instructional and need not be submitted. . These lab assignments will help students prepare for graded assignments, quizzes, and exams.

Homework:

In addition to any homework assignment given during class, it is a **standing assignment** that the student read each chapter of the book prior to its discussion. Following the class discussion, the student should reread the material and work with the exercises throughout the text. It is anticipated that students will spend at least 4-hours per week reading the text, working with the exercises and supplemental resources, and completing assignments.

Policies:

- Lateness – The roll will be taken at the beginning of class. If the student is not in attendance at that time, he/she will be carried in the roll book as being absent unless the instructor is notified immediately after class. Attendance sheets cannot be adjusted at following class meetings.
- The student must adhere to all college policies. Due to the nature of this course, it is recommended that the student review the policy titled “*Acceptable Information Technology Use at Bergen Community College*”.
- The use of portable electronic devices such as cell phones is not permitted while class is in session. Please be sure to silence electronic devices before entering class.
- The use of audio players and college computers to play music during class is prohibited.
- Students are expected to demonstrate listening, reading, note taking, and writing skills. The student will need to take notes during class discussions and understand and follow verbal and written directions.

All assignments and correspondence with the instructor (including e-mail) must be well written in full sentence format. Proper paragraph format must be used for all postings to the student bulletin board (if applicable).

- The subject line of all e-mail correspondence to the instructor must contain the course number and section and student's name. Any e-mail received without this information will not be opened.
- Plagiarism in any form will be treated as a failure to complete an assignment. All work submitted should reflect individual effort by the student.
- In borderline cases that arise in almost every class each semester a student's attendance, class participation, attitude, and observed effort will be considered in helping to determine the student's final grade.

If the instructor does not appear after 20 minutes following the scheduled time, students should generate an attendance list. One volunteer member need deliver the list, containing the course title, date, and instructor's name, to the Adjunct Office S-107 or to the Divisional Office (during the day) B-302.

BCC Attendance Policy

All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

Statement on Accommodations for Disabilities

Bergen Community College aims to create inclusive learning environments where all students have maximum opportunities for success. Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Office of Specialized Services at 201-612-5269 or via email at ossinfo@bergen.edu for assistance.

Additional policy and assessment information may be distributed by individual instructors.

Sample Course Outline:

1st Class - Covers Syllabus and class guidelines, first hands on learning of User Interface in Unreal, begin planning of first map

2nd Class - Expansions of tools and features as well as Content Browser, Material and Static Mesh application.

3rd Class - Implementing Weapon Placement, Pick-Ups, Teleporters, Lifts, Jump Pads, etc.

4th Class - Compile Death Match Maps / Last minute adjustments and changes, Play Death Match Map, begin planning Capture The Flag map.

5th Class - Setting up a Capture The Flag Map, Level Design Tips for creating a CTF map such as Lighting, Pathways, and other techniques.

6th Class - Setting up music for your Capture The Flag Map, using Unreal's Audio features, Learning pipeline to get external audio files into game maps.

7th Class - Implementing Blueprint functionality to your CTF map for chaotic element, make final adjustments and changes

8th Class - Compile Capture The Flag Map, last minute adjustments and changes, play CTF Map, begin planning Adventure Map.

9th Class - Using Unreal Terrain Editor, Setting up Landscape Materials, overview of Terrain Editor Tools

10th Class - Using Unreal's Cinematic Matinee features, using Triggers, Animation Sequences, and Timelines

11th Class - Using Blueprints for basic functionality in Adventure Map part 1.

12th Class - Using Blueprints for basic functionality in Adventure Map part 2.

13th Class - Utilizing level design techniques for polish; atmosphere, lighting, particle effects, Skylights and Directional lighting.

14th Class - Open lab, hands on help with adventure map, make-up maps, final adjustments and changes to adventure Map, Compile Maps

15th Class - Play Adventure Maps, review materials used in Semester, Last class