SYLLABUS
GAM 1111-01
AAA GAME DEVELOPMENT TOOLS

Spring 2023
MWF 2:00 Pm – 3:10 Pm
Classroom: NQSC 125 (Esports Arena)
Instructor: Brian Heagney
Office: NQSC 341
Cell phone: 336-456-2672
Email: bheagney@highpoint.edu
LinkedIn: www.linkedin.com/in/brianheagney/

Professor Heagney's Office Hours				
Monday	Tuesday	Wednesday	Thursday	Friday
12:30 – 2:00 PM	12:30 – 1:30 PM	12:30 – 2:00 PM	12:30 – 1:30 PM	

COURSE DESCRIPTION

Introduction to the digital technologies employed by the AAA game design and development companies to design, edit, store, and deliver content and assets to coworkers and end-users. This course provides an introduction to graphic and audio software packages, and AAA game engines. Students begin a digital portfolio. Four credits

FLEX-CLAUSE

Due to the nature of holding University classes during a national pandemic, I am reserving the right for any part of this course to change based on pressures from anything related to COVID-19. This includes any issues faced by students in this course, but also issues faced by myself, the instructor.
I am making it my mission to deliver the content to you, the student, and if we need to be flexible in the face of a pandemic, we will do what it takes to get through any obstacles thrown in our way.

COURSE OBJECTIVES

	By the end of the course, students should be able to:	Method for Assessing this Learning Outcome
Student Learning Outcomes:	understand the elements involved in planning, designing, and producing digital media *(Learning all the software like UE5 and the Adobe stuff)*	Production Projects, LinkedIn Portfolio
	understand the syntax & application of game asset production *(Learning the technical game making stuff)*	Production Projects, LinkedIn Portfolio
	demonstrate competence with professional AAA game development tools used in the games industry by developing professional game-ready audio and visual assets. *(git gud at game makin')*	Production Projects
	develop game-ready assets with Adobe Audition, Adobe Photoshop, and vector editing software, and integrate game assets into AAA game development software *(git gud at makin' stuff fer games)*	Production Projects
	Work well in groups with the ability to communicate efficiently while working on separate aspects of a video game. *(Collaborate on game without breaking game)*	Production Projects

TEXTBOOKS AND REQUIRED COURSE MATERIALS

- **NO TEXTBOOK**—While there will be assigned readings and videos for this course, all materials are available online through blackboard.
- A **USB flash drive 16GB** (or higher). Every student's storage space will differ. Some students have used 10 GB, some students have used much more. If you are saving your builds for your game on a weekly basis, you may need a lot of storage space. Bring your data/game/assets to every class to work on and show me.
- **Software/Computer Labs** – There will be some use of digital software for this class, all of which are installed on the computers in NQSC 125 (The Esports Arena). It is expected that you will have to organize your time accordingly to use this software, ensuring that you schedule time to work in the either of the two classrooms when there is not another class (or Esports practice) going on.

   Do NOT leave your school projects on the computers. The data will likely be erased, or inaccessible at some point. Use our class repository (push often) and/or jump drives.

ASSIGNMENTS AND GRADING

- **Module 1: Greyboxing Collaboration (Github + UE5) (10% of grade)** – Students will be introduced to Github Desktop (and Github), along with Unreal Engine 5. Students will form groups and use greyboxing techniques to design and layout an environment for an "escape room" styled video game.
- **Module 2: 3D Modeling (Blender + Substance Painter) (15% of grade)** – Students will learn the very basics of 3D modeling, unwrapping, and PBR Material creation using Substance Painter. Students will then learn how to import 3D models into Unreal Engine.
- **Module 3: Gameplay Programming a Simple Puzzle (Blueprints) (20% of grade)** – NOTE: Every student will design their own self-contained simple puzzle.

  Students will learn basic gameplay programming using Unreal Engine's Blueprints. Students will BEGIN by making a button open a door. Students will then use this structure to develop a slightly more advanced puzzle, such as a door opening up when you pick up a teddy bear or rotate a book (please don't do that).
- **Module 4: User-Interface Design (Illustrator + Widgets) (15% of grade)** – Students will learn to use Adobe Illustrator to create imagery to include as HUD elements for their simple puzzle. Students will also learn the basic use of widgets in UE5.
- **Module 5: Sound Design (Adobe Audition) (10% of grade)** – Students will learn to use Adobe Audition to edit captured audio to use as ambient sounds in their part of the map.
- **LinkedIn (5% of grade)** - All students are required to have an updated (current) LinkedIn profile that is strategically designed to showcase themselves for potential employment in the field of their choice.
- **Game Design Portfolio (5% of grade)** – In this course, students will begin a Game Design portfolio on a website of the student's choice (such as wix.com). Student's design portfolio needs to feature games from their time at college or university but does not need to feature a game from this course.
- **Participation (10% of grade)** – In this course, we will have in-class activities and other small assignments that will count toward participation. These activities will be based on the concepts and technology related to the module we are studying, but will not necessarily be part of the assignment.

  To clarify, during the module about 3D modeling, your major module assignment might be to model a piece of furniture, but our in-class activity for participation might be focused on modeling a tool. Alternatively, during the same module, you may be asked to come prepared with a 3D model already attempted for the beginning of class.
- **Quizzes (10% of grade)** – In this course, there will be quizzes based on readings and videos. These quizzes will be online and accessible from Blackboard.

Expectations for out-of-class work

Out-of-Class Work:	In addition to attending class and completing all course requirements, students are expected to spend at least 2 hours each week engaged in out-of class work (i.e., reading, studying, doing homework, working on projects, etc.) for every hour of credit earned in this course.

According to HPU's accreditation guidelines, for every 1 hour of credit earned in a course, students are expected to spend at least 2 hours each week engaged in out-of-class work (i.e., reading, studying, doing homework, working on projects, etc.). Therefore, in a 4-credit course, students are expected to commit an average of at least eight hours per week outside of class. (In a 2-credit course that meets for half of the semester, you are still expected to commit to an average of eight hours per week.) The estimates listed below reflect the out-of-class time expectations for a typical student – some students might need more or less time on these assignments.

- Readings and Videos – approx. 30 hours out of class throughout the semester
- Module 1: Greyboxing Collaboration – approx. 18 hrs. out of class
- Module 2: 3D Modeling – approx.. 18 hrs. out of class
- Module 3: Gameplay Programming Puzzle – approx. 18 hrs. out of class
- Module 4: UI Design - approx. 14 hrs. out of class
- Module 5: Sound Design - approx. 14 hrs. out of class
- LinkedIn / Portfolio – approx. 10 hrs. out of class

GRADING

Grading Scale

A (Amazing!) – superior quality (90-100%)	B (Beautiful) – clearly above average (80-89%)	C (Coasting) satisfactory work (70-79%)	D (Deficient) – good enough to credit (60-69%)	F (Flubbed) –work fails to meet the minimum expectations (0-59.9%)
A+ (97 - 100)	B+ (87 - 89.9)	C+ (77 - 79.9)	D+ (67 - 69.9)	F (0-59.9%)
A (93 - 96.9)	B (83 - 86.9)	C (73 - 76.9)	D (63 - 66.9)	
A-(90 - 92.9)	B-(80 - 82.9)	C-(70 - 72.9)	D-(60 - 62.9)	

- Please note that simply completing all required elements of an assignment does not entitle you to an A. Acceptable work of average quality earns a C. You must go above average expectations to receive an above average grade. This mimics the professional world of communication, where basic proficiency might get you in the door at the entry level, but creative thinking and a willingness to go beyond the minimum expectations are necessary to get noticed and advance.

Submissions for assignments:

All students must use blackboard to submit to every assignment (except "participation"). If a student does not submit to blackboard, then the professor will not be able to offer feedback, the student will receive a 0%, and the assignment will be counted as "late".

Most of the time the assignment will list what you will need to submit. If there is no official submission request from the professor, use best judgement based on knowing that the professor

will review all of your work. You will very likely need to submit all files that you worked on which could include word documents, animation files, 3D modeling files, etc.

In the event that you are working on a class repository that everyone has access to and you think that you don't need to "submit" anything, remember that you MUST submit something to blackboard in order to receive a grade and feedback. If it is true that you do not "need" to submit an actual file, then you still must submit something to the blackboard assignment, such as a note of where to find your important game level, a short write-up of how your submission responds to the assignment, or at minimum a note saying "Hello, Heagney!"

Feedback

All students will receive feedback through blackboard rubrics.

Grade Availability

This class is based on 1000 points. Once assignments are graded and posted, your grade will automatically update and be available on blackboard. This grade will be based on the current number of points you've earned, divided by the number of points that have been available up to that point.

Grade Appeal

 If a student has a complaint or concern about a faculty member regarding a grade, they should first try to resolve it with the instructor in question. If the complaint is not resolved through this interaction, the student should then go to the Department Chair. If the instructor of the course also serves as a Chair, then the student should approach the Dean as the first step in the process. For this course, a student should pursue the following process:
1. Talk with the instructor of the course,
2. Talk with Dr. Stefan Hall who serves as the Chair of the Nido R. Qubein School of Communication's Game Design department.
The decision of the Chair/Dean is final.

Grievance Procedure

If a student has a complaint or concern about a faculty member regarding any matter other than a grade, they should first try to resolve it with the instructor in question. If the complaint is not resolved through this interaction, the student should then go to:

1.   the Department Chair;

2.   the Dean of the School of Communication; then

3.   the Senior Vice-President of Academic Affairs, which is the final step in the grievance process.
Bypassing any of these steps—going directly to the president, for example—will not resolve the issue and will only delay resolution. Senior administration will not deal with grievance issue unless it has been discussed at the appropriate level.
For this course, a student should pursue the following process:
1. Talk with the instructor of the course.

2. Talk with Dr. Stefan Hall who serves as the Core Courses Coordinator of the Nido R. Qubein School of Communication.

3. Talk with Dr. McDermott, who serves as the Dean of the Nido R. Qubein School of Communication.

4. Talk with Dr. Bauer, who serves as the Senior Vice President of Academic Affairs of High Point University.

The decision of the Senior Vice President is final.

POLICIES FOR ASSIGNMENTS & EXAMS

Late work

See School of Communication policy at end of this document (short version = late work loses one letter grade per day; no late work is accepted after three days).

Makeup Exams

If this course has quizzes, then quiz due dates are final. Because the nature of my quizzes are that they are online and readily available, make-up exams will only be allowed due to typical reasons such as hospitalization or major accident or incident. Please discuss this with me in person.

ATTENDANCE POLICY

After two unexcused absences you will receive a Starfish notice (because we care). After a **SIXTH ABSENSE** you will be **dropped from the class**. Exceptions will only be granted for university-sanctioned events (with prior notice) or hospitalization (with a doctor's note). Tardies are also unacceptable. Be on time. Better yet, be early. Three tardies will equal an absence. Students will not be permitted to make up grades for work missed due to an unexcused absence or tardy.

COMMUNICATION

Email

Most of our out-of-class communication will be through email. Email is appropriate for any questions about assignments or grading. While I do give feedback for assignments through blackboard rubrics, if you're still confused or if you think I'm confused, please reach out through email.

Do NOT email me your assignments. Assignments should only be submitted through the blackboard interface.

My goal is to respond to emails within 24 hours during the weekdays. My other goal is to not work at all on the weekends, so I do not promise that I will respond at all during the weekends. Feel free to email me at any time of the day or night. I purposefully keep my work email OFF of my phone, so I will never be bothered by an email in the middle of the night.

Be informal. If you're writing me an email, just write what you need to write without beating around the bush. 😊

Text

I always include my cell number in case you ever have a question that needs to be answered right away. I don't promise that I'll be awake or respond, but feel free to text me any time of the day for rare emergencies. My phone sound is off and it won't wake anyone up if I'm asleep. Seriously, if I'm awake up in my office for some reason, and you're experiencing a disaster in the computer lab, it will help if you text me!

<u>Blackboard</u>

As mentioned throughout this syllabus, all assignments must be submitted through the blackboard interface. Sometimes that means submitting a project file. Sometimes it means submitting a zip folder. Sometimes it means submitting a link to a SHAREABLE google drive.

DIVERSITY

This course relies on students considering the diverse nature of players as they design for differing skills and abilities. This course also encouraging students to understand the diverse nature of their game design group, in terms of skills and backgrounds, and how to manage iterating a game successfully amidst that diversity.

OARS ACCOMMODATIONS IN THE CLASSROOM

High Point University welcomes students with disabilities into our educational programs. HPU promotes efforts to provide equal access and a culture of inclusion without altering the essential elements of coursework. If you anticipate or experience academic barriers that may be due to disability, including but not limited to, chronic medical conditions, Deaf or hard of hearing, learning disability, mental health, or vision impairment, please contact the Office of Accessibility Resources and Services at 336-841-9026 or OARS@highpoint.edu. The OARS office is located on the 4th floor of Smith Library

If you have an OARS accommodation letter, you are required to do the following:

(A) Meet with me privately during office hours or a scheduled appointment as early in the semester as possible to discuss implementing your accommodations. I am here to help you, and I want to make sure we discuss how best to integrate your OARS approved accommodations in a way that helps make you successful. Your accommodations will be implemented only after we meet to discuss the best path for your success.

(B) Give me reasonable notice (at least three business days) to implement your accommodations.

(C) If you have testing accommodations and we determine together that it would be best for you to take exams in the OARS testing center, you must arrange through

OARS with sufficient notice (3 business days for exams/quizzes and 6 business days for midterms and final). If you do not arrange your exam with OARS, I will not be able to provide extended time, assistive technology, or a distraction free environment, but you will be able to take the exam with the class.

(D) If you experience any access barriers in this course that are part of your OARS accommodations, such as with printed content, graphics, online materials, or any communication barriers; reach out to me or OARS right away.

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COURSE-SPECIFIC POLICIES

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COURSE DIRECTION

<u>Escape Room</u>

All students will work in groups and develop an "escape room" game that takes place in a typical house or building. Each student will only develop ONE room, and their "puzzle" must take place in their own one room and overall be self-contained and not rely on anyone else's puzzle.

The easiest way to do this is to have the player progress from one room to the next until the final escape.

<u>Rationales</u>

Escape Room: An escape room genre provides a nice introductory environment for students to learn about Unreal Engine basic principles and programming. Students will need to learn to program, but will not rely on complicated concepts such as AI, combat, networking, etc.

Typical House / Building: Having run this course before, I find that some themes and locations are more difficult to pull off, and some of the best examples were typical rooms and environments rather than spaceships, desserts, etc.

One Room / Puzzle Per Student: Last year students decided to combine puzzles and all of their coding got mixed up with each other and it became a disaster.
Timeline
We will finish the escape room game at the END of the semester. Each assignment will bring us one step closer to the finished product.
01 Greybox: The first assignment will introduce students to collaboration tools and the concept of greyboxing for level design. It will be quick and dirty.
02 3D Modeling: The 3D modeling assignment introduces 3D modeling software, and also encourages students to find and download existing 3D assets to use in their project to fill their rooms to make the game much more believable. In this assignment we will attempt to replace all of the greyboxing with more appropriate 3D models.

03 gameplay programming a simple puzzle: This is the assignment where we will program our puzzle. It should be relatively simple because there's not much time. We will begin with making a

button and a door, but will replace the "button" and "door" with other concepts (credit card and a door? Crowbar and a fake wall? You get the picture).

04 UI Design: In this module we'll add UI HUD features so that our player can be sure to understand our designs.

05 Audio: In this module we'll further the feeling of immersion with the addition of audio effects.

As we work through each of these modules, students will iterate their rooms and puzzles and by the end of the semester each group will be able to show off an escape room level.

BLACKBOARD BLACKBOARD BLACKBOARD BLACKBOARD BLACKBOARD

I am a self-avowed blackboard nut and evangelist. I use blackboard for all of my class administration, and therefore you MUST use blackboard as well. If you have never used Blackboard before, it will become your friend. If Blackboard is already your friend, you will become BFFs. If you dislike Blackboard, then please come see me and I will evangelize to you appropriately. The following is how I use Blackboard:

Assignments: All assignments will be hosted and explained in Blackboard. Every major assignment will have a rubric attached to it in Blackboard, which will help you understand how I will grade your submissions.

For every assignment, you MUST submit something through Blackboard. If you complete an assignment and do not submit it to Blackboard, it is as if you have not completed it and it will be counted as late.

Assignment Calendar: Blackboard has an amazing assignment calendar associated with it. When you go to the Blackboard assignment calendar, you will be able to see EVERY assignment and quiz that is assigned so you won't ever forget!

Syllabus: This syllabus will also be hosted on Blackboard.

Blackboard is Master: Blackboard assignment dates and descriptions take precedence over all dates/descriptions on this syllabus.

Problems with Blackboard: Please contact **IT** **IMMEDIATELY** if you do not have access to our class blackboard page. I cannot help you, only IT can help you. It is your responsibility to remedy the problem ASAP so you can participate in the course.

STARFISH SYLLABUS STATEMENT

High Point University cares about your success!

This course is part of a HPU initiative that utilizes Starfish Connect, a communication tool for students and faculty. Through Starfish, instructors, coaches, and advisors provide feedback to you about course progress by emailing you about your academic performance. The emails are designed to be helpful by identifying strategies that increase your success in courses. Be sure to open any emails you receive and follow the recommendations.

Your instructor, coach, or advisor may also recommend that you contact a specific campus resource, such as the Learning Lab or Counseling Center. If an instructor makes a referral, you may also be contacted directly by this campus service as a follow--up.

Starfish also allows you to schedule appointments with various offices and individuals across campus and request help on a variety of topics.

TENTATIVE SCHEDULE

This is a tentative schedule that is subject to change. Details for each week's assignments will be posted on Blackboard.

Week	Day	Date	Topic / Module	To Do	Estimated Hours
1	Monday	1/9	Module 1 Collaborate		Readings / Videos: 2 hours Greyboxing: 6 hours
1	Wednesday	1/11			
1	Friday	1/13			
2	Monday	1/16 MLK / NO CLASS			Readings / Videos: 2 hours Greyboxing: 6 hours
2	Wednesday	1/18			
2	Friday	1/20		Greybox level due	
3	Monday	1/23	Module 2 3D Modeling		Readings / Videos: 2 hours Blender Modeling: 6 hours
3	Wednesday	1/25			
3	Friday	1/27			
4	Monday	1/30			Readings / Videos: 2 hours Blender Unwrapping + Substance: 6 hours
4	Wednesday	2/1			
4	Friday	2/3			
5	Monday	2/6			Readings / Videos: 2 hours Substance + UE: 6 hours
5	Wednesday	2/8			
5	Friday	2/10		3D Model + Due	
6	Monday	2/13	Module 3 Button and a Door		Readings / Videos: 2 hours Button and Door: 6 hours
6	Wednesday	2/15			
6	Friday	2/17			
7	Monday	2/20			Readings / Videos: 2 hours Puzzle: 6 hours
7	Wednesday	2/22			
7	Friday	2/24			

Week	Day	Date	Module	Notes	Hours
8	Monday	2/27			Readings / Videos: 2 hours
	Wednesday	3/1			Puzzle: 6 hours
	Friday	3/3		SIMPLE Puzzle Due	
break	Monday	3/6			
	Wednesday	3/8			
	Friday	3/10			
9	Monday	3/13			Readings / Videos: 2 hours
	Wednesday	3/15			Illustrator: 6 hours
	Friday	3/17			
10	Monday	3/20		Heagney is at GDC in San Francisco	Readings / Videos: 2 hours Illustrator + UE Widgets: 4 hours LinkedIn / Portfolio: 2 hours
	Wednesday	3/22		There will be out-of-class assignments scheduled on blackboard!	
	Friday	3/24			
11	Monday	3/27	Module 4 Illustrator + Widgets		Readings / Videos: 2 hours UE Widgets: 4 hours LInkedIn / Portfolio: 2 hours
	Wednesday	3/29			
	Friday	3/31			
12	Monday	4/3			Readings / Videos: 2 hours Recording + Audition: 4 hours LinkedIn / Portfolio: 2 hours
	Wednesday	4/5			
	Friday	4/7 Good Friday / NO CLASS		Widget Due	
13	Monday	4/10 Easter Monday / NO CLASS	Module 5 Audition		Readings / Videos: 2 hours Audition + UE: 4 hours LInkedIn / Portfolio: 2 hours
	Wednesday	4/12			
	Friday	4/14			

14	Monday	4/17	Module 5 Audition		Readings / Videos: 2 hours UE Audio: 6 hours
	Wednesday	4/19 HONORS DAY NO CLASS			
	Friday	4/21			
15	Monday	4/24			Audition + UE: 6 hours LinkedIn / Portfolios: 2 hours
	Wednesday	4/26		Audioscapes Due	
EXAM BLOCK	Tuesday	5/2/2023 3:30 - 6:30 PM	Packaging the project!	LinkedIn / Portfolio Due	

School of Communication Policies, Practices and Expectations

Students are expected to adhere to all standards outlined in the School of Communication's Policies, Practices, and Expectations (located at http://www.highpoint.edu/communication/files/nqsc_syllabus_policies.pdf) unless alternate standards are specifically outlined elsewhere in this syllabus.