**GAM 3332-01**
**ANIMATION FOR VIDEO GAMES**
**M/W/F 10:40 AM – 11:15 AM**
**FALL 2022 SYLLABUS AND COURSE CALENDAR**

Classroom: NQSC 125C
Instructor: Brian Heagney
Office: NQSC 341

| Professor Heagney's Office Hours | | | | |
|---|---|---|---|---|
| Monday | Tuesday | Wednesday | Thursday | Friday |
| 1-2 PM<br>3:30 – 4 PM | 12 – 1:30 PM | 1-2 PM<br>3:30 – 4 PM | 12 – 1:30 PM | |

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LinkedIn: www.linkedin.com/in/brianheagney/

## COURSE DESCRIPTION

Students will learn the basics of creating animations for use of video games, and will learn technical skills in creating both 2D and 3D animations. Principles of animation will be discussed, and the course will explore how animation works in the context of video games. Additionally, students will develop an understanding of animation in the games industry, and will develop presentation and pitching skills. *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: | Learn the principles of animation and be able to create animations for games | All animation projects |
| | Develop and demonstrate design and technical skills for creating game assets | All animation projects |
| | Develop a critical understanding of how animation works in games | All animation projects |
| | Develop technical skills in AAA Game Engines | 2D Playable Character; 3D Playable Character I & II |

## TEXTBOOKS AND REQUIRED COURSE MATERIALS

- **NO TEXTBOOK**—While there will be assigned readings and videos for this course, all materials are available online for no cost. Details for weekly readings will be hosted on 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 Game Lab). 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 Game Lab when there is not another class going on.

## ASSIGNMENTS AND GRADING

- **2D Character Rig (20% of grade) –** Students will take an existing image of a 2D character, learn to break the character apart into components, rig the character using specified software, and develop a running or walking animation cycle.
  **MAIN PURPOSE:** This assignment is designed to introduce students to 2D vector editing software and to introduce 2D animation tools for rigging and animating. Full details will be on Blackboard.

- **2d Playable Character (20% of grade) –** Students will use their 2D Character Rig and build Idles, Jump, Attack, and Death animations, and finally implement them into Unreal Engine's 2D animation system.
  **MAIN PURPOSE:** This assignment is designed to give students the power to develop original 2D animations using Unreal Engine. Full details will be on Blackboard.

- **3D Playable Character I (20% of grade)** – Students will use pre-existing 3D models and skeletons to develop a walk or run cycle using 3ds Max
  **MAIN PURPOSE:** This assignment is designed to teach students how to fully implement a playable 3rd person character in Unreal Engine. Full details will be on Blackboard.

- **3D playable Character II (20% of grade) –** Students will use their walk or run cycle developed previously, combined with pre-existing animations from Mixamo, to develop and build a fully playable 3D character in Unreal Engine.
  **MAIN PURPOSE:** Students will apply animation principles to 3D animation. Full details will be on Blackboard.

- **Quizzes (10% of grade)** – There will be short online quizzes based on assignment texts and assigned readings and videos. In this course, quizzes must be taken to advance through the class modules.
  **MAIN PURPOSE:** These quizzes are intended to act as skill gates to ensure that all students engage in the assigned readings and videos before advancing to the next stages. All quizzes will be available on Blackboard.

- **Class Exercises (10% of grade) –** There will be short in-class exercises that will be turned in for credit. For example, one day we all may begin the day by spending 10 minutes drawing a coffee cup or light bulb or animating a spider. Students will turn in these activities for credit.
  **MAIN PURPOSE:** These activities are designed to stimulate the minds of the students to apply animation skills to new scenarios but in an informal and low-risk environment.

## 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.

- Assigned Readings & Videos – approx. 30 hrs out of class
- 2D Character Rig – approx. 24 hrs out of class
- 2D Playable Character - approx. 18 hrs out of class
- 3D Playable Character I – approx. 18 hrs out of class
- 3D Playable Character II – approx. 30 hrs out of class

## DEADLINES

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).

## GRADING

Grades are assigned as follows (there is no "rounding" of grades):

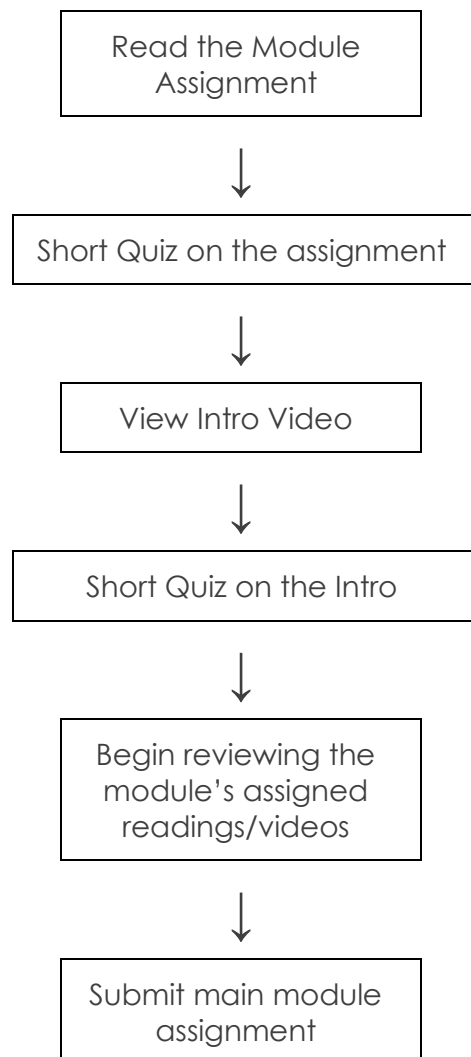| A (superior) – superior quality (90-100%) | B (excellent) – clearly above average (80-89%) | C (average) satisfactory work (70-79%) | D (inferior) – good enough to credit (60-69%) | F (failure) –work fails to meet the minimum expectations (0-59.9%) |
|---|---|---|---|---|
| A+ (97 - 100) | B+ (87 - 89.9) | C+ (77 - 79.9) | D+ (67 - 69.9) | |
| A (93 - 96.9) | B (83 - 86.9) | C (73 - 76.9) | D (63 - 66.9) | F (0-59.9%) |
| 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.

# 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:

**Blackboard Structure:** This course has a very specific structure on blackboard that is centered around modules that culminate in very specific deliverables (major projects). For each module there will be a series of readings, videos, and quizzes that must be followed in order, as shown in the diagram below:

## MODULE

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┌─────────────────────────────┐
│    Read the Module          │
│    Assignment               │
└─────────────────────────────┘
              ↓
┌─────────────────────────────┐
│  Short Quiz on the assignment │
└─────────────────────────────┘
              ↓
┌─────────────────────────────┐
│    View Intro Video         │
└─────────────────────────────┘
              ↓
┌─────────────────────────────┐
│    Short Quiz on the Intro  │
└─────────────────────────────┘
              ↓
┌─────────────────────────────┐
│   Begin reviewing the       │
│   module's assigned         │
│   readings/videos           │
└─────────────────────────────┘
              ↓
┌─────────────────────────────┐
│   Submit main module        │
│   assignment                │
└─────────────────────────────┘
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**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 assignments will be assessed.

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.

**Feedback:** Feedback for ALL assignments (including final assignments) will be conducted through blackboard rubrics.

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.

# DIGITAL PORTFOLIO

All students in the school of Communication are required to develop a digital portfolio on their LinkedIn page. The digital portfolio is an online collection of the work you've done during your time at High Point University.

The work you do in this class can be lit, rendered, and placed in your online portfolio.

# WRITING STYLES

Professional work should be written in the latest revisions of the Associated Press (AP) Style Manuals for print and broadcast. (Yes, AP also has a style manual for broadcast.) The School requires academic papers to be written in the latest revision of the American Psychological Association (APA) style. If you're unfamiliar with this style, please see the Chair or the Dean. Other academic styles are not accepted unless the student work is written for a publication or event that requires a different format. Having students learn multiple writing styles only confuses them.

# ABSENCES AND TARDIES

Because I care about you, after two unexcused absences you will receive a Starfish Notice. I will continue to make Starfish notices due to absences at my discretion. I care about your education and I want you to learn. Also, if you miss a couple of classes in a row, I might just worry about you.

Tardies are also unhelpful for everyone. Be on time. Students will not be permitted to make up grades for work missed due to an unexcused absence or tardy.

## COPYRIGHT, PLAGIARISM, AND CHEATING

Each of you signed the HPU Honor Code and it is your responsibility to abide by it. Cheating or plagiarism can result in failure for the course. Theft of intellectual property (such as images, audio, or video) is equivalent to plagiarism. See the School of Communication policies on plagiarism and copyright at the end of this document.

On occasion, the professor will provide media/materials for use in class. These materials may include photos, video/audio files, scripts, and design templates. These items are copyrighted (by the professor and others) and may only be used in classroom exercises as specified by the professor. Consequently, students may not use media supplied by the professor in their projects unless they have been given permission to do so. Student projects containing unauthorized material provided by the professor may be penalized or disqualified. Students also may not share, distribute, or post online any media that contains media elements provided by the professor.

In addition, the professor holds the copyright on all course materials including lectures, PowerPoint presentations, handouts, video/audio media, etc. Consequently, course sessions and materials cannot be recorded, copied, or distributed in any form without the written permission of the professor.

Plagiarism involves copying the work of others and/or representing it as your own without attribution. Students should not use any media created by another student or outside entity (e.g. downloaded online) in their assignments without prior permission from the professor. In addition, students should not copy edited sequences, documents, sessions, or projects and represent them as their own. Incidents of copyright infringement and plagiarism will be treated as University Honor Code violations.

# 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 Chair of the Department of Game Design.

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 of Academic Affairs is final.

## EXAM BLOCK

At High Point University, every course is expected to use its designated exam block. While I try to clearly mark the exam block date and time on this syllabus and on Blackboard, please note that if it is incorrect for any reason, it is expected that ALL STUDENTS verify the correct date and time using the Registrar's website.

In this course, we will use the exam block for a fun in-class 3D modeling activity.

## 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 | Sub Topic | To Do | Estimated Hours |
|---|---|---|---|---|---|---|
| **1** | Monday | 8/22 | 2D | Vector Art | | Readings / Viewings: 2 hours<br>2D Character Rig: 6 hours |
| | Wednesday | 8/24 | | | | |
| | Friday | 8/26 | | | | |
| **2** | Monday | 8/29 | | | | Readings / Viewings: 2 hours<br>2D Character Rig: 6 hours |
| | Wednesday | 8/31 | | | | |
| | Friday | 9/2 | | | Due at End of Week: Illustrator Files | |
| **3** | Monday | 9/5 | | Walk Cycle | | Readings / Viewings: 2 hours<br>2D Character Rig: 6 hours |
| | Wednesday | 9/7 | | | | |
| | Friday | 9/9 | | | | |
| **4** | Monday | 9/12 | | | | Readings / Viewings: 2 hours<br>2D Character Rig: 6 hours |
| | Wednesday | 9/14 | | | | |
| | Friday | 9/16 | | | Due at End of Week: 2D Character Rig | |
| **5** | Monday | 9/19 | | Unreal Engine + Other Cycles | | Readings / Viewings: 2 hours<br>2D Playable Character: 6 hours |
| | Wednesday | 9/21 | | | | |
| | Friday | 9/23 | | | | |
| **6** | Monday | 9/26 | | | | Readings / Viewings: 2 hours<br>2D Playable Character: 6 hours |
| | Wednesday | 9/28 | | | | |
| | Friday | 9/30 | | | | |

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| **7** | Monday | 10/3 | | | | Readings / Viewings: 2 hours<br>2D Playable Character: 6 hours |
| | Wednesday | 10/5 | | | | |
| | Friday | 10/7 | | | Due at End of Week:<br>2D Playable Character | |
| **BREAK** | Monday | 10/10 | | | | |
| | Wednesday | 10/12 | | | | |
| | Friday | 10/14 | | | | |
| **8** | Monday | 10/17 | | | | Readings / Viewings: 2 hours<br>3D Playable Character I: 6 hours |
| | Wednesday | 10/19 | | | | |
| | Friday | 10/21 | | | | |
| **9** | Monday | 10/24 | 3D | 3D Playable Character 1: Mixamo | | Readings / Viewings: 2 hours<br>3D Playable Character I: 6 hours |
| | Wednesday | 10/26 | | | | |
| | Friday | 10/28 | | | | |
| **10** | Monday | 10/31 | | | | Readings / Viewings: 2 hours<br>3D Playable Character I: 6 hours |
| | Wednesday | 11/2 | | | | |
| | Friday | 11/4 | | | Due at End of Week:<br>3D Playable Character 1 | |
| **11** | Monday | 11/7 | | Playable 3D Character 2: Maya | | Readings / Viewings: 2 hours<br>3D Playable Character II: 6 hours |
| | Wednesday | 11/9 | | | | |
| | Friday | 11/11 | | | Due at End of Week:<br>Make Human Character | |
| **12** | Monday | 11/14 | | | | Readings / Viewings: 2 hours<br>3D Playable Character II: 6 hours |
| | Wednesday | 11/16 | | | | |
| | Friday | 11/18 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **13** | Monday | 11/21 | | | | Readings / Viewings: 2 hours<br>3D Playable Character II: 6 hours |
| | Wednesday | 11/23 | | | | |
| | Friday | 11/25 | | | | |
| **14** | Monday | 11/28 | | | | Readings / Viewings: 2 hours<br>3D Playable Character II: 6 hours |
| | Wednesday | 11/30 | | | | |
| | Friday | 12/2 | | | | |
| **15** | Monday | 12/5 | | | | Readings / Viewings: 2 hours<br>3D Playable Character II: 6 hours |
| | Wednesday | 12/7 | | | Due at End of Week:<br>3rd Person Unreal Animation Due | |
| **Exam Block** | Saturday, December 10 8 AM - 11 AM | | In Class Activity | | | |

# 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.