# Game Studio I
## GAMES-GT 120
## Fall 2018

**Course Syllabus**

Professors:    Bennett Foddy foddy@nyu.edu
               Tuesdays and Thursdays 9:30am-1215pm, Room 830
               Matt Boch mattboch@nyu.edu
               Tuesdays and Thursdays 2pm-4:45pm, Room 830

Technical Instructors:
               Dong Zhou dz1221@nyu.edu
               Milan Koerner-Safrata milanks@nyu.edu

**Course Description**

Game Studio I is the Game design MFA program's introductory game development course. Students will gain experience producing several different kinds of digital game, working alone and in teams on a series of three game development projects. The focus of this course is on developing a broad set of practical skills that will prepare students for developing games alone or in groups, and also — very importantly — on developing the crucial skills of giving and receiving critical design feedback.

**Course Objectives**

At the completion of this course, the student will be able to:

1. Demonstrate competence producing polished and complete small-scale games using the Unity game engine.
2. Demonstrate an ability to make a game from beginning to end both by themselves and in small groups.
3. Analyze and articulate strengths and weaknesses in the student's and classmates' work.
4. Design and implement a digital game within tight creative and genre constraints, learning to solve context-specific design problems.
5. Gain insight into the technical and creative dimensions of each aspect of digital game production: art, sound, programming, and design.
6. Develop a personal creative process, allowing the student to translate ideas into the form of a digital game.
7. Understand how the scope of a digital game should be constrained in order to make development possible within time and resource limits.

**Course Format**

The course meets twice per week. The lecture meeting will be used for discussion and critique, in-class exercises, and mini-lectures and tutorials on different elements of game production and workflow. The labs will be focused on work time, and will include additional instruction in the development platforms for this course. Students should expect to put in at least 10 hours per week outside of these two class meetings.

**Assignments And Readings**

The semester's work is divided into three phases, each bookended by completion of a significant project.

The first is a 3 week project, done in Unity3D, using a code-free framework for the Unity engine that focuses on storytelling. Each student will submit their own project, but will be assigned to a small group of their classmates who will serve as critics & advisors for one another. These projects will be critiqued on the basis of their storytelling, and AV presentation. We will offer brief lectures on how to use this framework, as well as some short demos of Photoshop, Illustrator, & Audition, each of which should prove useful in crafting your game.

Second is a 4 week project, using Unity3D to create a walking simulator inspired game about exploring a 3D space. Students will work in pairs, selected by the professors, attempting to match experienced coders with experienced artists or writers. We will provide a basic framework for a walking simulator, but students will be expected to augment it significantly by writing their own code. By this point in the semester, students will have been introduced to the basics of C# for Unity, so the expectation is that everyone will be contributing to the creation of both code & assets. 3D asset creation, including level design and terrain will be taught using Probuilder & ProSculpt, free packages for Unity3D that are serviceable alternatives to more complex 3D modeling & animation tools.

In the final phase of the semester, students will work in groups of 2-3 over the course of 7 weeks to create a more ambitious game project in a genre of their choice. These groups must be approved by the professors, again trying to ensure that more experienced artists are team up with more experienced coders. This final phase will have a few milestones, important dates by which a project is expected to have achieved a certain level of completion. The first milestone is due at the end of week 1, which is a concept and a small prototype. The second milestone, due at the end of week 3, is a "proof of concept" build, a playable prototype that demonstrates the core intent of the game. After the second milestone, all additional art for the project should be crafted by the less experienced artist. Likewise, all code for the project should be written by the less experienced coder(s) on the team. The final milestone is submission of the complete game, due during the last week of class.

Assignments are submitted and presented in lecture meetings, for discussion and critique by the class. Due dates are as follows:

Lecture class, week 3 (9/18): Visual Novel game due.
Lecture class, week 7 (10/23): Walking Simulator game due.
Lecture class, week 8 (10/30): Final Project, milestone 1.
Lecture class, week 10 (11/23): Final Project, milestone 2.
Lab class, week 14 (12/13): Final Project due.

Game Studio is predominantly a practical class, so there is no primary text, although some readings may be assigned in digital format.

**Grading**
In Game Studio I, the emphasis is on building a broad understanding of a variety of skills. Grades for the projects will therefore depend heavily on students' improvement in areas of weakness. Strong coders will not be rewarded for making good games that have simple visuals or rudimentary sound design, and strong artists will not be rewarded for avoiding programming. You are absolutely required to get out of your comfort zone. Challenge yourselves!

Final grade for the class will be calculated as follows.

Participation in discussion and critique 20%
Visual Novel game: 25%
Walking Simulator: 25%
Final Project: 30%

**Statement Of Academic Integrity:**
Plagiarism is presenting someone else's work as though it were your own. More specifically, plagiarism is to present as your own: A sequence of words quoted without quotation marks from another writer or a paraphrased passage from another writer's work or facts, ideas or images composed by someone else.

Importantly however, Game Studio I is not a course in programming, so students will have read access to the code and project files of their peers. Students are expected to produce unique gameplay, art and sound, but may borrow code liberally from their classmates.

**Accessibility:**
Academic accommodations are available for students with documented disabilities. Please contact the Moses Center for Students with Disabilities at 212 998-4980 for further information.

**Attendance:**
Attending and arriving on time to all class sessions is required and expected. This includes all labs, recitations, and critiques. If you will be missing a class due to illness, or unavoidable personal circumstances, you must notify your professor in advance via email for the absence to be excused.

Unexcused absences and being late to class will lower your final grade. Three unexcused absences lower your final grade by a letter.  Each subsequent unexcused absence will lower another letter grade. Two tardies will count as one unexcused absence. Arriving more than 15 minutes late to class will also count as an unexcused absence.

**Health:**
Your health and safety are a priority at NYU.  If you experience any health or mental health issues during this course, we encourage you to utilize the support services of the 24/7 NYU Wellness Exchange 212-443-9999.  Also, all students who may require an academic accommodation due to a qualified disability, physical or mental, please register with the Moses Center 212-998-4980. Please let your instructor know if you need help connecting to these resources.

**Schedule**
**(Note: this is subject to change — the class will be adjusted according to the needs of the students)**

| Week | Date | Topic |
|------|------|-------|
| 1 | 9/4 | Intro to Unity Editor & Visual Novel Framework |
| 2 | 9/11 | 2D Art Considerations & Tools |
| 3 | 9/18 | Sound Design Considerations & Tools |
| 4 | 9/25 | Critique of Visual Novel, Version Control Intro |
| 5 | 10/2 | 3D Art Workflow: Modeling, Texturing & Materials |
| 6 | 10/16 | Animation & Particle Systems |
| 7 | 10/23 | 3D Level Design Tips & Tricks |
| 8 | 10/30 | Critique of Walking Simulator, Production Basics |
| 9 | 11/6 | Unity UI & Input Systems |
| 10 | 11/13 | 2D & 3D Physics Engines |
| 11 | 11/20 | Critique of Final Project Milestone 2 - No additional topics |
| 12 | 11/27 | Cameras & Post Processing, Game Feel exercise |
| 13 | 12/6 | Optimization and Profiling, Building |
| 14 | 12/13 | Final presentations (during the lab class) |