Game Design 205: Code for Games (aka Game Programming II)

Eugenio María de Hostos Community College - Humanities Dept.



In order to continue in this class beyond the first week, all enrolled students must complete the Course Intro & Agreement Form before the start of class in the second week of the semester.

Spring 2021 Syllabus

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Code for Games

(AKA Game Programming II)

Basic Course Info

Course GD205 - 711A

Class Number 30429

Course Title Code for Games (Game Programming II)

Meets Spring 2021 / Thu 5:30-8:15PM / Location information below

Credit Hours 3

Instructor Professor Juno Morrow (she/her pronouns)

Class Site hostosmdp.ryver.com (Private Team: S21 - GD205 Game Programming II)

Office/Hours Mon 2-4pm, Thu 1-2pm. DM on Ryver to confirm availability and then meet here

Office Phone 718.518.6682 (not available during remote teaching semesters)

[IMPORTANT] New users to Ryver should register using this <u>hyperlink</u>. Students with existing Ryver accounts should send a message to @Juno requesting to be added to the course team.

Full instructions for how to use Ryver.

Course Description

This course builds upon students' foundational knowledge of coding fundamentals with a focus on the creation of games. Students are introduced to new applications of core coding concepts such as variables, loops, classes and conditionals, as well as basic animation techniques. Using professional tools, students create a series of game interactions in preparation for conceptualizing and building a final small game. This course also covers topics such as artificial intelligence, collision, and physics algorithms, as well as teaching students how to use a variety of pre-built game architectures.

Instructor

Intro:

Hey folks! My name's Juno Morrow. You can call me Juno, Morrow, Prof. Juno Morrow, Prof. Morrow, Prof. Juno, etc. I'm not picky as long as it's respectful. I use she/her pronouns. I'm the Game Design Program Coordinator here at Hostos and this is my 12th time teaching this course at Hostos.

If you need to reach me, you can send me a message on Ryver (@Juno), which is the preferred means of communication. Feel free to message me at any time day or night. I usually respond within 24-hours on weekdays. If you don't hear from me within 24-hours, feel free to message again as I may have missed your message. For questions about classwork, I also recommend asking your peers in the classroom chat since many people have the same



junomorrow.com junomorrow.itch.io jmorrow@hostos.cuny.edu juno.morrow@gmail.com for emergencies only!

questions and others may be able to respond more quickly than I can.

Biography:

Juno Morrow is a multidisciplinary artist, independent game designer, photographer and educator living in Brooklyn, New York. She is an Assistant Professor of Game Design and Unit Coordinator at the City University of New York's Eugenio María de Hostos Community College. At Hostos, she has been developing the game design program, the first public degree program of its kind in New York City, since 2015. Prior to that, Morrow earned an MFA in Design and Technology from Parsons School of Design and a BA in Media Production from the University of Houston. As an internationally exhibiting artist and designer, Morrow has presented games and spoken at sites such as SXSW, GDC, MAGFest and the Smithsonian American Art Museum. With over 10 years of experience as an award-winning photographer, she's had work featured in *The Guardian*, *Dwell* magazine and released 3 monographs of urban photography.

Her unusual games, often infused with dark humor, feature distinctive aesthetics and novel premises. Examples include *Oral Perspectives*, a VR game taking place inside the player's mouth, and *Mastering Tedium*, an existentialist laundry simulator played inside a text terminal. Recent work includes *Pruuds vs. Sloots*, a "dumb versus game," *Blood Broker*, a consent-based human sacrifice management simulator, and *Marginalia*, a memoir examining intersections of mixed-race and transgender identities.

Prerequisites

GD105 Code for Art and Design (aka Game Programming I)

Course Objectives

By the end of the course, students should:

- Show clear mastery or growth of goal achievement using code throughout the course, as demonstrated by each of the weekly assignments.
- Successfully employ fundamental programming concepts (loops, conditional statements, arrays, etc.) in pursuit of solutions to novel coding problems.
- Clearly communicate coding strategies used in pursuit of these solutions both verbally and in the form of comments left within their code.
- Students should have a robust understanding of the nature of Object-Oriented Programming, being able to manipulate object and class relationships both in the Unity Editor and using C#/Unity API scripting.
- Demonstrate use of and familiarity with version control technology (i.e. Github)

Textbooks

None

Required Equipment

• USB Mouse - We will be working in Unity, which is a 3D development environment, for which a

wireless mouse is HIGHLY recommended. These can be found for as little as \$5.

- A computer capable of running Unity 2019+ with a microphone and camera.
- USB Drive Either a bus-powered portable hard drive or a very fast USB flash drive with at least 32GB of storage is recommended for storing project files. Students with laptops can alternatively use their personal computers for coursework and are encouraged to do so.

Commitment to Diversity and Safer Spaces (source)

We understand the classroom as a space for practicing freedom; where one may challenge psychic, social, and cultural borders and create meaningful artistic expressions. To do so we must acknowledge and embrace the different identities and backgrounds we inhabit. This means that we will use preferred pronouns, respect self-identifications, and be mindful of special needs. Disagreement is encouraged and supported, however our differences affect our conceptualization and experience of reality, and it is extremely important to remember that certain gender, race, sex, and class identities are more privileged while others are undermined and marginalized. Consequently, this makes some people feel more protected or vulnerable during debates and discussions. A collaborative effort between the students and instructor is needed to create a supportive learning environment. While everyone should feel free to experiment creatively and conceptually, if a class member points out that something you have said or shared with the group is offensive, avoid being defensive; instead approach the discussion as a valuable opportunity for us to grow and learn from one another. Alternatively if you feel that something said in discussion or included in a piece of work is harmful, you are encouraged to speak with the instructor.

Weekly Structure

Each week will consist of a lesson session and/or a studio session (usually both). Lessons will be delivered via Twitch using the <u>official Hostos Game Design account</u> or on Blackboard Collaborate. Students are expected to attend and ask questions via the chat function. These will be recorded and made available after the class session. Studio/seminar sessions will typically be held after the lesson for students to share their work, receive feedback and 1-on-1 help. For the first week of class, we will begin on Collaborate in the Course Room, so please be present on-time on day one.

Assignments

This is a studio course involving a combination of lecture, project activities, and discussion of assigned readings. Staying on top of the reading assignments is essential in order to be informed and make contributions during in-class discussions and activities. These readings will reference and introduce concepts and vocabulary that may at times be unfamiliar and so require students to do independent research. This will be expected.

25% of the grade will be based on engagement, consistent attendance and weekly participation on Ryver. The balance of the grade will be determined by several evaluations of the work undertaken over the 15 week course.

Submission & Class Ryver

Assignments are required to be turned in as a post on the class team <u>at least</u> an hour before the start of class. I will be reviewing that week's posted assignments during this pre-class period. Students that have a display name not matching their roster name will not be able to receive credit.

We will plan on ensuring access to Ryver and the class team on the first day of class. Please email me or see me during office hours for any technical problems you may be having.

Extra Credit

Throughout the semester, there may be opportunities for extra credit to be earned. In order to receive the extra credit, students must complete the assignment in full and post it to the team by the deadline. Extra credit opportunities will be listed in the Extra Credit Forum on Ryver. There may also be additional extra credit opportunities offered during class time and hidden in lecture materials with specific instructions for receiving credit.

Online Attendance & Participation

Every student begins the term with full participation points (a quarter of the total grade). Regular attendance is required in order to maintain a proper grasp of the material, participate in discussions and class activities, as well as maintain a good participation grade. Every student is required to check Ryver at least 3 times per week for important messages and updates. They are also required to submit at least 5 public chat messages in the class chat and/or one of the public forums. It's vital that everyone contribute to keeping our community active and engaged, especially against a backdrop of remote learning.

Attendance will be taken every single class. Students enrolled in this course will be allowed a fixed number of flexible absences for any reason throughout the semester (including both those that would traditionally be considered excused and unexcused). No points will be deducted from the grade for all absences <u>up to</u> the number chosen or allotted by default for the student.

Students will indicate how many flexible absences they want allotted before the second class of the semester. There will be no excused absences beyond the number allotted. It is recommended that students choose the smallest number of absences that they can strive to achieve. Setting high.but.realistic standards for oneself encourages better performance. The option chosen will be permanent for the remainder of the semester and cannot be changed. Students who do not indicate how many absences via the Course Intro and Agreement form by the second week will be assigned the default number of absences (3).

For the first class session missed in excess of the allotted amount, **30**% of the participation points will automatically be deducted. **Additional absences beyond that will trigger an automatic failure of the course**. Lateness is highly discouraged; 3 tardies will be treated as one absence. Students arriving more than half an hour late will

be considered absent and marked accordingly.

Absences on account of emergencies will be evaluated on a case-by-case basis. However, these are exceedingly rare and should not be something that comes up more than once every few years.

Please note the following language that faculty are required to include regarding remote learning: "Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live."

Grade Breakdown

Assignment	Description	Value
Final Instructor Evaluation	For the last day of the class, students will be required to give a formal presentation of their work from the semester, from individual assignments up to the final game design. 1/4 of the grade will be determined based upon the instructor's evaluation of course objective achievement for each student.	1/4
Final Communal Evaluation	1/4 of the grade will be evaluated based upon peer evaluations of the course objective achievement, as determined by a consensus of the class body earlier in the semester.	1/4
Final Individual Evaluation	1/4 of the grade will be determined by individual self-evaluation, based upon an individually constructed list of course objectives. In the event that a student does not submit the required rubric for self-evaluation before the deadline, these points will instead be divided equally between the instructor and communal evaluations.	1/4
Participation	A quarter of the grade will be allocated based upon regular attendance of the class, in-class participation and the completion of weekly assignments.	1/4
Total		4/4 (100%)

Notes on the grading criteria:

Work will be evaluated according to the following criteria:

- Understanding and interpretation of core concepts
- Research and Analysis of related issues
- Contribution to in-class discussion

Tentative Course Schedule

Readings must be completed for each class. Not all assigned texts will be discussed in class or covered in the class lectures.

<u>Please note that this schedule is tentative and subject to change</u> Please check the class blog for the most recent assignments and updates

Week	Class	Lecture	Due
1	02/04	Class Intro; Class Setup; Intro to Unity; Rubric assignment	
2	02/11	Programming Concepts: Variables, Conditionals	Ind. Student Rubric; Course Agreement Form; Unity Beginner Scripting Tutorials 1-5; Paul Ford's What is Code?
3	02/18	Programming Concepts: Loops	CE1
4	02/25	Programming Concepts: Functions	CE2
5	03/04	Programming Concepts: Arrays	CE3
6	03/11	Programming Concepts: Objects	GE1
7	03/18	Raycasting	
8	03/25	Review	
9	04/01 04/08	Additional Raycasting; Review	GE2

10	04/15	Presentation: Final Game Proposal Each student will prepare a small game proposal in the form of a short formal presentation. These presentations will detail the goal of their game, its core mechanic, the narrative, coding strategy, assets needed to build, and precedents being referenced. The class will review and critique these proposals and students will spend the last third of the semester building and testing their games.	GP
11	04/22	Production: Prototype 1 / Testing; Animation The first prototype should demonstrate the student's ability to develop and code the game's core mechanic.	FGP1
12	04/29	Production: Prototype 2 / Testing The second prototype should introduce graphic assets to the game and other game assets (e.g. timer, score, etc.).	FGP2
13	05/06	Production: Prototype 3 / Testing The third and final prototype should have a refined core mechanic, working visual assets, and the larger game environment (start screen, game over, score, sounds, etc.) put in place. This prototype will require observed and recorded play testing for final presentation and critique the last day of classes.	FGP3
14	05/13	Final presentation of goal achievement throughout the semester.	FG
15	TBA	Make-up day (final exam period)	

Hostos-wide Academic Policies

Hostos Community College believes that developing student's abilities to think through issues and problems by themselves is central to the educational process. Since the Hostos College degree signifies that the student knows the material s/he has studied, and the practice of

academic dishonesty results in grades or scores that do not reflect how much or how well the student has learned, understood, or mastered the material, the College will investigate any form of academic dishonesty brought to its attention. If the charge of academic dishonesty is proved, the College will impose sanctions. The three most common forms of academic dishonesty are cheating, plagiarism, and bribery.

Cheating (from Catalogue)

In the collegiate setting, cheating is defined as the purposeful misrepresentation of another's work as one's own. Faculty and students alike are responsible for upholding the integrity of this institution by not participating either directly or indirectly in act of cheating and by discouraging others from doing so.

Plagiarism (from Catalogue)

Plagiarism is a form of cheating which occurs when persons, even if unintentionally, fail to acknowledge appropriately the sources for the ideas, language, concepts, inventions, etc. referred to in their own work. Thus, any attempt to claim another's intellectual or artistic work as one's own constitutes an act of plagiarism.

Bribery (from Catalogue)

In the collegiate setting, bribery involves the offering, promising, or giving of items of value, such as money or gifts, to a person in a position of authority, such as a teacher, administrator, or staff member, so as to influence his/her judgment or conduct in favor of the student. The offering of sexual favors in exchange for a grade, test score, or other academic favor, shall be considered attempted bribery. The matter of sexual favors, either requested or offered, in exchange for a grade, test score or other academic favor, shall also be handled as per the Sexual Harassment procedures of the College.

Online Learning Note:

Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live.

College Attendance Policy (from Catalogue)

Students are expected to attend all class meetings in the courses for which they are registered. Classes begin at the times indicated in the official schedule of classes. Arrival in class after the scheduled starting time constitutes lateness.

The maximum number of absences is limited to 15% of the number of scheduled class hours per semester and a student absent more than the indicated 15% is deemed excessively absent. Attendance is monitored from the first official day of classes. In the case of excessive absences or lateness, the instructor has the right to lower the grade, assign a failing grade, or assign additional written work or readings.

Absences due to late registration, change of program, or extenuating circumstances will be considered on an individual basis by the instructor. Each department and program may specify in writing a different attendance policy. Instructors are required to keep an official record of student attendance and inform each class of the College's or department's attendance policy.

NOTE:

- Any work missed during any period of absence must be made up by the student.
- To meet financial aid criteria, a student must attend class at least once in the first three weeks and once in either the fourth or fifth week of class.

ADA Statement

As required by the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, reasonable accommodations are provided to ensure equal opportunity for students with verified disabilities.

If you have a disability that requires accommodations, contact:

Accessibility Resource Center Savoy (D) Building 120 Walton Ave, Room D101P Bronx, NY 10451 Phone: (718) 518-4454 (Voice/TTY)

If you are already registered with ARC and have a letter from them verifying that you are a qualified student with a disability, please present the letter to the instructor as soon as possible. The instructor will work with you and ARC to plan and implement appropriate accommodations.

Please Note:

Students who do not register with the ARC office and have their disability verified are not eligible to receive any special accommodations.

Additional Policies

- CUNY Policy on <u>Academic Integrity</u>
- Política de Integridad Académica de CUNY [Spanish]
- Policy on retention of academic records
- CUNY Uniform Grade Symbols: Glossary and Guidelines
- CUNY Testing Policy for students with disabilities

- CUNY Policy on Drug and Alcohol
- CUNY <u>Testing Policies and Procedures</u>
- State Education Department <u>rules on awarding credit for same courses in different degree programs.</u>
- Religious Accommodation of Students Memo from General Council.
- CUNY student complaint procedure
- Board of Trustees resolution on articulation and transfer

Withdraw Grade Clarification

Grade	Definition	Who Initiates the Grade?	Punitive or Non-Punitive?	Is this grade recorded on student	Will Financial Aid Pay for this Grade?
				transcript?	
WD	Withdrawn, Dropped This grade indicates that the student has officially withdrawn from the course during the 2 nd or 3 rd week of classes.	Student	Non-Punitive	No	Financial Aid pays based on the days the student attended the course.
W	Withdraw without penalty This grade indicates that a student has good and sufficient reasons for withdrawing from the course, prior to the 10th week of the course.	Student	Non-Punitive	Yes	Financial Aid pays based on the days the student attended the course.
WA	Immunization Non-Compliance Grade Given to students who do not show proof of immunization	Registrar's Office	Non-Punitive	Yes	Financial Aid pays up to the 30 th day the student has been reported in attendance.
WU	Unofficial Withdraw Unofficial withdrawal (when a student attends at least one class session, stops attending the course, and does not complete required forms to withdraw from class) or excessive absences signify that the course was not completed.	Faculty	Punitive Included in GPA as an F grade	Yes	Financial Aid pays 50% of the eligible award.
WN	Withdrawn – Never Attended If "No, Never Attended" is selected on the "Commencement of Attendance" roster (by the faculty member via CUNYfirst) the College assigns a "WN" grade for the course.	Faculty*	Non-Punitive	No	If a student is a financial aid recipient and receives a "WN" grade, there will be an adjustment made in the amount of federal aid.

^{*} WN Grade-If a student was <u>incorrectly</u> given a WN grade (marked "Never Attended) a WN grade reversal form is required before another grade can be assigned. If a student has attended class at least once, the form should be completed by the faculty member and signed by the department chair. WN grades negatively impact financial aid awards and incorrect WN grades must be addressed immediately. WN Grade reversal forms submitted <u>after</u> the last day of the term (when final grade rosters have been made available to faculty) require a signature from a dean in the Office of Academic Affairs.

Important Information

- -Each type of "W" grade affects students' Satisfactory Academic Progress (SAP).
- -Credits are counted as attempted credits and cumulative earned units towards the completion of degrees.
- -Students are eligible to receive a lifetime maximum Pell award of six years.

Statistics Regarding Missing the First Day of Class

ALMOST 4096 OF STUDENTS WHO MISS THE FIRST DAY OF CLASS FAIL THE CLASS

Students who miss up to 5% of class (1 absence if the class meets 2x/ week)

- 8.5% of them fail the class
- Have an average GPA of 3.03
- Less than 4% of them lose financial aid eligibility

Students who miss more than 15% of class (4 absences if the class meets 2x/week)

- 48% of them fail the class
- Have an average GPA of 1.43
- 22% of them lose financial aid eligibility

If for some reason you can no longer attend the class, you must officially withdraw from the class (see pg. 47 in the Hostos catalog)