CSS 385 A
Introduction To Game Development
Course type: Face-to-Face

Taught by: Yusuf Pisan
Instructor Evaluated: Yusuf Pisan-Other

Evaluation Delivery: Online
Evaluation Form: A
Responses: 36/43 (84% very high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Median	College Decile
4.3	**5**
(0=lowest; 5=highest)	(0=lowest; 9=highest)

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 4.7
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK Inst	DECILE RANK College
The course as a whole was:	36	53%	25%	19%			3%	4.6	6	7
The course content was:	36	44%	33%	11%	8%		3%	4.3	5	6
The instructor's contribution to the course was:	36	44%	25%	22%	6%		3%	4.3	3	4
The instructor's effectiveness in teaching the subject matter was:	36	33%	33%	19%	11%		3%	4.0	3	5

STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median	DECILE RANK Inst	DECILE RANK College
Do you expect your grade in this course to be:	35	11%	34%	26%	23%	3%		3%	5.3	5	6
The intellectual challenge presented was:	35	14%	26%	20%	34%	3%		3%	5.0	2	2
The amount of effort you put into this course was:	35	20%	40%	11%	23%	3%		3%	5.8	5	5
The amount of effort to succeed in this course was:	35	14%	20%	31%	26%	3%	3%	3%	5.0	2	2
Your involvement in course (doing assignments, attending classes, etc.) was:	35	29%	26%	20%	20%	3%		3%	5.7	4	4

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 11.8 Hours per credit: 2.4 (N=34)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
		3%	6%	18%	21%	24%	18%	3%	3%	3%	3%

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 7.5 Hours per credit: 1.5 (N=32)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	3%	16%	31%	12%	9%	12%	9%		3%		3%

What grade do you expect in this course?

Class median: 3.9 (N=34)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
62%	32%	3%	3%											

In regard to your academic program, is this course best described as:

(N=34)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
21%	3%	76%			

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK Inst	DECILE RANK College
Course organization was:	36	42%	25%	19%	11%		3%	4.2	4	5
Clarity of instructor's voice was:	36	31%	42%	19%	6%		3%	4.0	2	4
Explanations by instructor were:	36	44%	28%	14%	11%		3%	4.3	4	5
Instructor's ability to present alternative explanations when needed was:	36	44%	36%	11%	6%		3%	4.3	4	5
Instructor's use of examples and illustrations was:	36	47%	28%	11%	11%		3%	4.4	4	5
Quality of questions or problems raised by the instructor was:	36	42%	31%	14%	11%		3%	4.2	4	5
Student confidence in instructor's knowledge was:	36	44%	33%	8%	11%		3%	4.3	3	3
Instructor's enthusiasm was:	35	57%	29%	6%	3%	3%	3%	4.6	4	5
Encouragement given students to express themselves was:	36	64%	22%	6%	3%		6%	4.7	5	7
Answers to student questions were:	35	54%	26%	11%	3%	3%	3%	4.6	5	6
Availability of extra help when needed was:	36	36%	28%	25%	8%		3%	4.0	2	4
Use of class time was:	36	42%	22%	22%	11%		3%	4.1	4	5
Instructor's interest in whether students learned was:	36	50%	28%	14%	3%		6%	4.5	4	5
Amount you learned in the course was:	36	36%	33%	22%	6%		3%	4.1	3	5
Relevance and usefulness of course content were:	35	40%	37%	14%	6%		3%	4.2	3	4
Evaluative and grading techniques (tests, papers, projects, etc.) were:	36	44%	31%	17%	6%		3%	4.3	4	5
Reasonableness of assigned work was:	36	67%	14%	11%	6%		3%	4.8	7	8
Clarity of student responsibilities and requirements was:	36	53%	17%	14%	14%		3%	4.6	5	6

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STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. Yes. This course was very organic in that we defined the project and the overall scope. As someone working in the field, this felt the most like an actual professional assignment.

2. As someone who's done Unity in the past, this was pretty familiar territory for me, but I really did enjoy getting to work on a group project again. I learned a lot about my abilities with Unity, whether it be with game design, player mechanics, or art and animations.

3. Yes, we are making a game of our choice so we got a lot of options.

4. Yes, I feel like this class had me thinking in a different way because the material was different from any other classes I had.

5. Many great points raised. Also was very interesting to consider different solutions to solving the goals we wanted for our games. Finally, it was very valuable to have the different coding approach from much of what we were used to, because this was event-based, which while it has a decent amount of existence in industry, is not something we are able to get much practice with in our other assignments for different classes. So even though, the events occurring were selecting game code instead of starting a business task, the idea of an event driving an idea, and thinking around contingencies for event timing was very useful.

6. Yeah definitely through a lot of weird unity problems at me

7. n/a

8. There is just so much depth that there isn't really enough time to fully understand unity

9. Being new to game development, this was really challenging. Having to navigate the software as well as learn C#, it was hard through and through.

10. It was intellectually stimulation because we learned a new language i.e C#, and game development in Unity itself was brand new topic and I learned a lot of things

11. Yes, this class had a huge mountain to overcome at the beginning with most of us students not having any experience with Unity or C#.

12. I stretched my thinking in the sense that I was not used to programming in a more event-oriented manor, and using the Unity framework, so that was really cool

13. I think the class is stimulating cooperation between members of the group. It changed how I would want to work with my team because we all have a different images of the final product.

14. Extremely. Creating a video game is not easy and it takes a lot of thinking.

15. Yes, it gave the freedom to interpret different concepts in various ways, allowing a very flexible amount of thinking around 1 thing or subject, requiring a lot of thought into how to incorporate or modify it to work with something we want

16. Yes, the course material was really helpful for someone looking to go into the game industry. All the assignments and especially the final project were really helpful for me to learn a lot of things.

17. Yes, I had to think of fun features to implement into the game and how to implement them.

18. The class was intellectually stimulating due to the creative nature of the course. There is likely no other CS course that has creativity built into it such as this one.

19. Yes, It was very open-ended so it allowed for creativity and working to the student's strengths in the assignment, it lead to people doing their own research into their project.

21. Even though I was experienced with unity, because I picked a type project that I am not used to doing, it was intellectually stimulating to figure out how to make it work.

22. This course was incredibly intellectually stimulating. Not only did I learn C#, but I also had to learn the Unity editor and multiple tricky aspects of game design. I had to think differently from a normal CS course, I needed to think creatively.

23. This class taught me a lot about building out code for a massive project from scratch. I didn't have much experience with this as I do not have a lot of experience in huge projects, so I was forced to practice good coding habits as much as I could.

24. Lots of new things to learn in terms of programing game mechanics

25. Yes, it was about game scripting so it gave the students (like me) a lot of room to explore and be creative.

What aspects of this class contributed most to your learning?

1. Having a small introduction to the structure and use of the IDE and then being allowed to research and grow in its usage as a programmer

2. Being able to work on our own projects independently, and have industry professionals come in to talk to us about their experiences in the industry really helped my learning.

3. Independent studying

4. Exercise assignments

5. The final project was fantastic opportunity to make a larger-scale project while still within a class and a relatively bounded time-frame.

6. Practice spent doing unity stuff. Guest lectures

7. n/a

8. Youtube tutorials

9. First 2 weeks of tutorial was a good way for introduction.

10. Guest speakers. Thank you for offering the class. It definitely the most fun and the most tough electives that I have taken so far.

11. Examples and assignments related to Unity game development.

12. the fact that the project was self guided allowed us to decide what things we wanted to learn, which was really cool

13. Learning the basic structure of the unity.

14. Every aspect of it.

15. a lot of the unity stuff was completely new and we used it for everything so it (and the unity learning assignment) contributed and was used throughout the duration of the project which also contributed a lot to my learning in this course.

16. The final group project.

17. Guest speakers

18. The creative freedom in being able to choose whatever game to develop allows the students to test the limits of their creativity, an opportunity that does not come up often in Computer Science courses.

19. The unity assignments at the beginning of the quarter were helpful, especially when we talked about them in class after completing them.

21. I think the big game project is the main one that contributed to my learned as I could use the skills myself.

22. The Unity examples and practices done in class were extremely beneficial in teaching me how to use the Unity editor.

23. Just making the games and exploring our creative sides while using the coding knowledge we have built up throughout our time in Computer Science.

24. Group learning allowed us to help each other when stuck

25. The free thinking aspect of the course when it comes to game design and development.

What aspects of this class detracted from your learning?

1. None to note.

2. I kind of wished we spent more time looking into different Unity mechanics, but the 100 Unity mechanics repository did do an effective job of that.

3. I felt like this class is just purely project work without any teaching after 2 weeks.

4. Nothing

5. The guest speakers, while interesting, also had quite a lot of overlap in what they had to say. So, potentially taking away one or two of them and having a few less visits. OR, some kind of coordination, so they are able to take a deeper dive into a subtopic within the industry or their role.

6. nothing really.

7. n/a

8. Not much unity learning in class other than the beginning of the quarter

9. A little lack of common practices used.

10. Not enough exercise. I felt like we were thrown to complete first two projects without all the necessary information and exercise that were necessary, and quickly moved on to developing our own game.

11. Guest speakers were fun, but I felt there was not enough time in the beginning learning about Unity.

12. If I had to name one aspect, it would be the fact that working in teams can sometimes make it hard to work, because you are waiting on someone else to do their part first, or you dont understand what they did. but that is hoiw the real world works

13. I cannot work well with my team

14. None.

15. N/A

16. NA

17. The focus I had to put on other aspects of the final project such as web development, art, and sound.

18. None.

19. Canvas should have everything that Discord has easily accessible, sometimes I had to search through Discord to find specific links to things.

22. Having to collaborate with a group to create the game makes the class very challenging and I found myself struggling more with collaboration than with the actual work.

23. Nothing really. The class was designed to teach the basics of Unity and then it was on us to expand those basics into whatever we wanted. Most of the time we had was about the projects we were making and I used my time to its fullest.

24. Lack of resources to find out how to do mechanics

25. The endless debugging and crashing heads with GitHub

What suggestions do you have for improving the class?

1. Expansion or another class into 3d programming and modeling as it seems this is relevant to game development studio representatives that talked to us in class

2. I took a class similar to this in high school, and in it we created a Game Design Document that outlined all the details of our game. I don't know if we would be able to do this in a quarter, but it is industry standard and I think would work super well for this class.

3. Helping out students more by taking a look at the coding of our project and coming up with suggestions would be great.

4. None

5. Potentially taking away one or two guest speakers having a few less visits. OR, some kind of coordination, so they were able to take a deeper dive into a subtopic within the industry or their role.

6. None

7. n/a

8. more unity lessons, demo some of the 100 game functions

9. I think spending time on teaching the most basic fundamentals of game development and of the engine would really be beneficial for beginners like me.

10. I would recommend to have more mutiple excersies that helps student to adapt and learn more techniques with unity instead of the first two projects. Without developing a foundation in Unity, I think its really hard for student to complete the first two projects. Many will do it but I think most them will have really hard time with it. The final project is good as it is in my opinion.

11. Push guest speakers to later in the quarter. More time for project development. Push class final presentation into finals.

12. none that we didnt go over in class

13. A bigger warning on what's time-consuming. EX. Don't suggest building a XXX system because multiple groups tried to build it and didn't have time. Instead of don't suggest XXX system.

14. It is perfect

15. Add a github &/or github pages tutorial assignment along with the unity basics one, help students avoid merge conflicts in github (can make separate scenes in unity which are different files, each has its own work in there, write a scene manager to incorporate all scenes)

16. I think it would be helpful for new students if there is a narrow down on the game mechanics topics and its implementation.

17. Some more documentation for the assignments would be nice, was not sure exactly what was expected from the presentations towards the end. Also some more focus on individual exercises would be nice.

18. Cover more game development before letting the class work on their game (ex: 3D game development).

19. Different unity assignments rather than having the second build on the first, so students can get a wider set of things they learn about unity. Add sounds/color/sprite-related information to these assignments.

20. Some of the assignments did not have clear instructions in obvious instructions, people have had to ask for clarification in discord.

22. I believe it's very difficult to squeeze a game development course into a 10 week quarter. This was probably the best way to go about it.

23. There honestly isn't much I would improve on because there are external variables that you cannot control like the length of the class and time to build a game. I would say to force teams to base their game around one key game mechanic and fully build that mechanic out. It would create simple or more polished games. Getting teams more focused on planning before they start to code their game is important. I also think having a "think tank" of Unity experienced people helping the teams once or twice in the quarter would help people progress their projects. These "Unity experienced" people could be past students of the course, TAs, yourself, developers in the industry, etc. that can come in and help the teams that want that extra boost.

24. None

25. make the designing the game a longer project rather then having two assignments first. if it was a quarter long project the games would've come out a lot smoother with less stress.

IASystem Course Summary Reports summarize student ratings of a particular course or combination of courses. They provide a rich perspective on student views by reporting responses in three ways: as frequency distributions, average ratings, and either comparative or adjusted ratings. Remember in interpreting results that it is important to keep in mind the number of students who evaluated the course relative to the total course enrollment as shown on the upper right-hand corner of the report.

Frequency distributions. The percentage of students who selected each response choice is displayed for each item. Percentages are based on the number of students who answered the respective item rather than the number of students who evaluated the course because individual item response is optional.

Median ratings. *IASystem* reports average ratings in the form of item medians. Although means are a more familiar type of average than medians, they are less accurate in summarizing student ratings. This is because ratings distributions tend to be strongly skewed. That is, most of the ratings are at the high end of the scale and trail off to the low end.

The median indicates the point on the rating scale at which half of the students selected higher ratings, and half selected lower. Medians are computed to one decimal place by interpolation.[1] In general, higher medians reflect more favorable ratings. To interpret median ratings, compare the value of each median to the respective response scale: *Very Poor, Poor, Fair, Good, Very Good, Excellent (0-5); Never/None/Much Lower, About Half/Average, Always/Great/Much Higher (1-7); Slight, Moderate, Considerable, Extensive (1-4).*

Comparative ratings. *IASystem* provides a normative comparison for each item by reporting the decile rank of the item median. Decile ranks compare the median rating of a particular item to ratings of the same item over the previous two academic years in all classes at the institution and within the college, school, or division. Decile ranks are shown only for items with sufficient normative data.

Decile ranks range from 0 (lowest) to 9 (highest). For all items, higher medians yield higher decile ranks. The 0 decile rank indicates an item median in the lowest 10% of all scores. A decile rank of 1 indicates a median above the bottom 10% and below the top 80%. A decile rank of 9 indicates a median in the top 10% of all scores. Because average ratings tend to be high, a rating of "good" or "average" may have a low decile rank.

Adjusted ratings. Research has shown that student ratings may be somewhat influenced by factors such as class size, expected grade, and reason for enrollment. To correct for this, *IASystem* reports **adjusted medians** for summative items (items #1-4 and their combined global rating) based on regression analyses of ratings over the previous two academic years in all classes at the respective institution. If large classes at the institution tend to be rated lower than small classes, for example, the adjusted medians for large classes will be slightly higher than their unadjusted medians.

When adjusted ratings are displayed for summative items, **relative rank** is displayed for the more specific (formative) items. Rankings serve as a guide in directing instructional improvement efforts. The top ranked items (1, 2, 3, etc.) represent areas that are going well from a student perspective; whereas the bottom ranked items (18, 17, 16, etc.) represent areas in which the instructor may want to make changes. Relative ranks are computed by first standardizing each item (subtracting the overall institutional average from the item rating for the particular course, then dividing by the standard deviation of the ratings across all courses) and then ranking those standardized scores.

Challenge and Engagement Index (CEI). Several *IASystem* items ask students how academically challenging they found the course to be. *IASystem* calculates the average of these items and reports them as a single index. *The Challenge and Engagement Index (CEI)* correlates only modestly with the global rating (median of items 1-4).

Optional Items. Student responses to instructor-supplied items are summarized at the end of the evaluation report. Median responses should be interpreted in light of the specific item text and response scale used (response values 1-6 on paper evaluation forms).

[1] For the specific method, see, for example, Guilford, J.P. (1965). Fundamental statistics in psychology and education. New York: McGraw-Hill Book Company, pp. 49-53.