

# COURSE SUMMARY REPORT

Numeric Responses

University of Washington, Bothell Sci, Tech, Engr. & Math Science, Tech, Engr. & Math Term: Winter 2021

## CSS 133 A Computer Programming For Engineers II Course type: Online

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

**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:

Evaluation Delivery: Online Evaluation Form: I Responses: 9/17 (53% high)

Median	College Decile
3.9	3
(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: 4.9	
(1=lowest; 7=highest)	

## SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECI Inst	LE RANK College
The distance learning course as a whole was:	9	33%	22%	33%	11%			3.8	2	3
The course content was:	9	33%	33%	33%				4.0	4	4
The instructor's contribution to the course was:	9	44%	22%	22%	11%			4.2	3	4
The effectiveness of the distance learning format was:	9	33%	22%	22%	11%	11%		3.8	2	3

## STUDENT ENGAGEMENT

Much						1 Much											
Relative to other college courses you have taken:						N	(7)	(6)	(5)	(4)	(3)	(2)	Lower (1)	Median	Inst	College	
Do you expect your grade in this course to be:							9		33%	11%	44%	11%			4.4	1	2
The intellectual challenge presented was:							9	11%	33%	11%	44%				5.0	2	2
The amount of effort you put into this course was:							9		44%	22%	22%	11%			5.2	2	2
The amou	unt of effor	t to succe	ed in this c	ourse was	:		9	11%	44%	22%	22%				5.6	4	4
Your involetc.) was:	lvement in :	course (c	loing assigi	nments, at	tending cla	ISSES,	9		33%	22%	44%				4.8	0	0
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	s media	ın: 9.5	Hours	per cred	it: 1.9	) (N=8)		
Under 2	2-3		4-5	6-7	8-9	10-11		12-13		14-15	1	6-17	18-	19	20-21	22	or more
		2	25%	12%	12%	12%		12%		25%							
From the valuable in	total avera n advancir	age hours ng your ec	above, how ucation?	v many do	you consi	der were					Class	s media	ın: 8.5	Hours	per cred	it: 1.7	′ (N=8)
Under 2	2-3	2-3 4-5 6-7 8-9 10-		10-11		12-13		14-15	16-17 18-19			20-21	20-21 22 or more				
	12%	o 2	25%		25%			12%		12%	1	2%					
What grade do you expect in this course?														Clas	ss media	n: 3.5	5 (N=8)
A (3.9-4.0) 12%	<b>A-</b> (3.5-3.8) 50%	B+ (3.2-3.4) 12%	B (2.9-3.1)	в- (2.5-2.8) 12%	C+ (2.2-2.4)	C (1.9-2.1) 12%	C- (1.5-1.	8) (1.	D+ .2-1.4)	D (0.9-1.1	D ) (0.7	)- -0.8)	E (0.0)	Pass	s Cre	dit	No Credit
In regard to your academic program, is this course best described as:																	(N=8)
A core/distribution In your major requirement An elective 88%						In	your m	inor	Ар	orogram 12	require 2%	ment		Other			



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## STANDARD FORMATIVE ITEMS

		Excellent	Very Good	Good	Fair	Poor	Very Poor		DECI	LE RANK
	Ν	(5)	(4)	(3)	(2)	(1)	(0)	Median	Inst	College
The helpfulness of the distance learning staff overall was:	8	38%	12%	25%	12%	12%		3.5	0	
Student confidence in instructor's knowledge was:	9	44%	22%	22%	11%			4.2	2	3
Timeliness of instructor response to assignments was:	8	25%	25%	50%				3.5	1	2
Quality/helpfulness of instructor feedback was:	8	38%	25%	38%				4.0	3	3
Tailoring of instruction to varying student skill levels was:	9	44%	22%	22%	11%			4.2	4	
Clarity of course objectives was:	8	25%	25%	25%	25%			3.5	1	2
The organization of the study guide was:	9	22%	22%	22%	22%	11%		3.2	0	
Content of the study guide was:	8	25%	25%	38%		12%		3.5	0	
Relevance of textbook for self-study was:	8	25%	25%	12%	25%	12%		3.5	0	
Usefulness of reading assignments in understanding course content was:	8	38%	25%	12%	25%			4.0	4	5
Usefulness of written assignments in understanding course content was:	8	25%	38%	25%	12%			3.8	2	3
Usefulness of video media in understanding course content was:	8	25%	38%	25%	12%			3.8	0	
Usefulness of online resources in understanding course content was:	8	25%	38%	12%	25%			3.8	2	3
Usefulness of audio media in understanding course content was:	8	25%	25%	25%	12%	12%		3.5	0	
Relevance and usefulness of course content were:	8	38%	38%	12%	12%			4.2	3	4
Evaluative and grading techniques (tests, papers, projects, etc.) were:	8	25%	38%	25%	12%			3.8	2	3
Reasonableness of assigned work was:	9	22%	33%	33%	11%			3.7	2	2
Clarity of student responsibilities and requirements was:	9	33%	22%	33%	11%			3.8	2	2



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## STANDARD OPEN-ENDED QUESTIONS

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

1. Yes, expanded knowledge on coding and relation to engineering aspects

2. Yes, Pisan gave great explanations and brought energy to the whole class

3. Yes, this class was intellectually stimulating. Code doesn't come easy, but I think this class did help me understand and stretch my thinking a little more when it came to coding concepts and different ways of coding in C++.

4. Yes, I learned a lot about coding and CS, which has helped my understanding of computers as a whole.

6. This class helped me further develop problem-solving strategies for writing some very interesting C++ programs. Recursion initially destroyed my brain, but I feel a lot more comfortable with understanding/writing recursive functions after taking this class.

#### What aspects of this class contributed most to your learning?

1. how code is implemented in real life

2. The in-class engagement, class exercises, and homework

3. I really liked the moments where we would break up into different breakout rooms and work with other students on an example. I also really liked how professor Pisan would code in real-time and go through an example with the class.

4. Zybooks

6. I think the biggest factor that contributed to my learning this quarter was Professor Pisan. I had complete confidence in his knowledge of all of the course content, so I never hesitated to ask any questions. I also greatly appreciated how patient he was because he must've gotten annoyed with how many questions I asked.

#### What aspects of this class detracted from your learning?

1. Number of heavy weighted exams

2. Some of the project homework required knowledge obtained outside of class resources.

3. Sometimes I feel like the powerpoints were a little boring.

4. N/A

6. There wasn't anything that detracted from my learning.

## What suggestions do you have for improving the class?

- 1. Fewer exams, more projects
- 2. More class exercises to put class content into action.
- 3. I suggest more examples and real-time coding examples.

4. I do not know, I think it was pretty good.

5. The assigned homework could better align with the content on the exams. I think the exam content never went beyond what was covered in class, but it did go beyond what the homework assignment content was.

6. What I liked last quarter is that the assignments were posted before the Monday that class started for that week. It helped me understand the lectures better when I had a chance to review the material beforehand. Also, I really liked the concept of the introductory song at the beginning of class. It was really different from my other classes and helped take the sting out of recursion a little bit. For the introductory songs before class, maybe change them up a little throughout the quarter (every couple of weeks?) because it can get a little bit tiresome listening to the same exact song every class. Overall, great idea though.

## INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

## What advice would you give to a student taking this course that will help them succeed?

1. Practice a lot.

2. Engage, ask questions, and have fun!

3. I would probably suggest them to watch videos outside of class to get a better grasp of the concepts presented in class. Sometimes, if you don't understand a specific concept, you can ask the professor, but other times it's nice to get a broader perspective on a topic.

4. Pay attention to zybooks and go to the class.

Evaluation Delivery: Online Evaluation Form: I Responses: 9/17 (53% high) 5. Take the time to practice challenging problems on all the topics covered during lecture.

6. Play around with various functions and learn how they actually work. Print out an object that is set to a NULL pointer, or use output statements to see what string functions output (i.e., cout << string.length(), cout << string[string.length() - 1]). It really helps to know what is actually happening when using a function for writing functional programs and debugging errors.



*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.<sup>1</sup> 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).

<sup>&</sup>lt;sup>1</sup> 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.