

CSS 342 F
Data Structures, Algorithms, And Discrete Mathematics I
Course type: Face-to-Face
Taught by: Yusuf Pisan
Instructor Evaluated: Yusuf Pisan-Other

Evaluation Delivery: Online
Evaluation Form: A
Responses: 16/37 (43% moderate)

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 4.2 (0=lowest; 5=highest)	College Decile 5 (0=lowest; 9=highest)
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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: 6.0 (1=lowest; 7=highest)
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SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK	
									Inst	College
The course as a whole was:	16	25%	56%	12%	6%			4.1	4	5
The course content was:	16	31%	44%	19%	6%			4.1	3	5
The instructor's contribution to the course was:	16	50%	31%	12%	6%			4.5	4	5
The instructor's effectiveness in teaching the subject matter was:	16	44%	19%	25%	12%			4.2	4	5

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)		(3)	(2)	Much Lower (1)	Median	DECILE RANK	
											Inst	College
Relative to other college courses you have taken:												
Do you expect your grade in this course to be:	16	25%	12%	12%	31%	12%	6%			4.5	2	3
The intellectual challenge presented was:	16	62%	12%	25%						6.7	9	9
The amount of effort you put into this course was:	16	50%	44%	6%						6.5	9	9
The amount of effort to succeed in this course was:	16	38%	38%	12%	12%					6.2	8	7
Your involvement in course (doing assignments, attending classes, etc.) was:	16	38%	50%	6%	6%					6.2	8	8

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: 10.5 Hours per credit: 2.1 (N=16)

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
6%	6%	6%	19%	25%	6%	25%					6%

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

Class median: 8.7 Hours per credit: 1.7 (N=16)

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
6%	6%	12%	6%	31%	6%	12%	12%				6%

What grade do you expect in this course?

Class median: 3.5 (N=16)

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
25%	25%	19%	19%	6%		6%								

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

(N=16)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
75%	19%			6%	

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK	
									Inst	College
Course organization was:	16	31%	38%	25%	6%			4.0	3	5
Clarity of instructor's voice was:	16	12%	44%	31%	12%			3.6	1	2
Explanations by instructor were:	16	25%	31%	19%	25%			3.7	2	3
Instructor's ability to present alternative explanations when needed was:	16	25%	44%	19%	12%			3.9	2	3
Instructor's use of examples and illustrations was:	16	31%	38%	12%	12%	6%		4.0	2	4
Quality of questions or problems raised by the instructor was:	16	31%	44%	19%	6%			4.1	3	4
Student confidence in instructor's knowledge was:	16	56%	31%	6%	6%			4.6	4	5
Instructor's enthusiasm was:	16	56%	25%	12%	6%			4.6	4	5
Encouragement given students to express themselves was:	16	44%	19%	31%	6%			4.2	2	4
Answers to student questions were:	16	31%	50%	12%	6%			4.1	3	4
Availability of extra help when needed was:	16	31%	50%	6%	12%			4.1	3	4
Use of class time was:	16	38%	31%	19%	12%			4.1	3	5
Instructor's interest in whether students learned was:	16	44%	31%	12%	12%			4.3	3	4
Amount you learned in the course was:	16	50%	25%	12%	6%	6%		4.5	6	7
Relevance and usefulness of course content were:	15	53%	20%	13%	13%			4.6	5	6
Evaluative and grading techniques (tests, papers, projects, etc.) were:	16	31%	31%	25%	6%	6%		3.9	2	3
Reasonableness of assigned work was:	16	38%	44%	6%	12%			4.2	3	5
Clarity of student responsibilities and requirements was:	16	44%	44%	6%	6%			4.4	4	5

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STANDARD OPEN-ENDED QUESTIONS

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

1. Yes, very much so. I enjoyed the challenge this class presented, and it definitely kept me thinking all quarter. I would take this course again with Professor Pisan, and any future courses that I may hopefully have an opportunity.
2. Yes, It was really interesting to learn about memory management and operator overloading. however I did feel like a lot of the course was review from CSS 143
3. It was intellectually stimulating. Thinking through the algorithms and remembering syntax is high-level stuff.
4. Yes, lots of tough and new concepts to learn
5. Yes, it took concepts that we already learned about in 142 and 143 and added an extra level to them, keeping track of complexity and memory leaks were challenging but important.
7. It did because I got to learn more about C++.
8. Yes, this class was intellectually stimulating and stretched my thinking. It presented material I had never encountered and required difficult details of implementation.
9. The LeetCode section is always the most exciting and challenging.
10. Yes, it really did. My brain burned while doing the projects and stuff. But in the end, when I got them done, I realized how much I learned.
11. Yes
12. This class really challenged my understanding of computer programming, and really taught me a lot about Unix and C++. There were a lot of headaches along the way, but that's just how C++ is, as it's so much different from any other programming language I've ever used, and that's a good thing.
13. It was outside of the class, inside not as much due to the amount of leetcode questions. I would have preferred a more in-depth explanation of core concepts.

What aspects of this class contributed most to your learning?

1. The projects and the leetcode problems were wonderful. The way the projects were set up allowed us to spend more time learning and less time stressed out. I believe Pisan's approach to his projects is very refined in this matter and I appreciate being able to benefit from his years of teaching.
2. The in class exerices. they really helped me learn about different ways to approach problems and solve tricky problems
3. Walking through in-class activities was helpful.
4. LeetCode really helped me learn and understand algorithms better
5. The projects were very useful for learning, I didn't do great on some of them but I learned a lot from my failures. Leetcode challenges were also very helpful.
6. I really like how leetcode was part of the curriculum as this is important in our career too.
7. In class activities
8. Using leetcode heavily to practice concepts was a boon to my learning in this course.
9. Leetcode problems, professor being active in discord and able to answer questions most of the time
10. Projects, and working on the projects.
11. yea
12. The LeetCode and project assignments were super helpful. LeetCode really taught me a lot about common programming interview questions, and the project assignments were almost like a crash course in C++, and while I did struggle, it taught me a lot about the quirks of C++.
13. Slides

What aspects of this class detracted from your learning?

1. Being confused about topics during class and not knowing how to form a good question, but it wasn't as big of a deal because the classes were recorded and I could study those ideas that confused me and reference the class time later.
2. I feel like we may have gotten a bit behind, so It felt like we were rushing to get though the material at the end which made it a bit hard to get a thorough understanding
3. The readings were not pushed to be completed and didn't have grades attached to them, so it was difficult to remember to do them.
4. Nothing
5. Nothing, the class was very productive and worked well.

6. I think in the beginning, the emphasis on setting up docker wasn't really obvious. Also, in your instructions, it was unclear that we could either use Docker or the lab machines, so people who docker did not work for them, could just use the lab machines and be fine.
7. none
8. I felt that the lectures and the professor's explanations of new concepts were heavily lacking in detail. Whenever something new was presented, the professor quickly demonstrated the topic without going into much detail. It made it difficult to follow along with demonstrations and even more difficult to ask questions.
9. Honestly, it is the best class I ever had
10. Sometimes the assignment instructions weren't clear and I got confused and stressed.
12. Nothing detracted from my learning.
13. Leetcode, it was nice at times when we understood what to do, other times it was just a waste

What suggestions do you have for improving the class?

1. Nothing. I think it is set up great and a very fair class.
2. Maybe have some additional induction examples or practice problems. It felt a little harder to practice induction than other topics
3. Make the readings graded submissions of just a sentence saying you completed it and one thing you learned to improve motivation to complete them. Smaller projects maybe? it was pretty good all in all.
4. Although the LeetCode were very beneficial, I wish we had other types of problems or work to do during class
5. Keep doing what you are doing.
6. The first day of class could had a better transition as I remembered we quickly glance over the << operator and other file syntax like #endif importing stuff. This was overwhelm and I talked to some of my classmates afterwards and they felt the same. Because everyone has previously taken java, if you explain everything like a vector is because a dynamic array or ArrayList, it would make the transition easier for us.
7. More lectures on proofs and discrete math
8. Spend more time presenting topics and do so with greater detail.
9. It would be great to be able to find lectures in "File" as well, but I also like the way we access files now
10. The class recordings are really hard to follow. It would be great if Prof Pisan can share the screen of the PowerPoint instead of just showing himself and the whiteboard behind him in the recording. And also please include more instructions for the SkipList assignment! I couldn't understand how the SkipLists work for a long time and I got so stressed!
12. This is mostly my fault, but going into this class I thought Java and C++ would be very similar, and so I wasn't too worried about attending the Zoom meetings before school started. I was completely wrong. There was so much different about Java and C++ that even at the end of the quarter I'm still learning new things about it. In a nutshell, in the email you send all the upcoming CSSE students, make sure to tell everyone who only have experience in Java to practice a ton of C++, and learn as much as you can before school starts.
13. Make the midterms and finals 40% of the course grade, add a quiz section and make that 10% and have a quiz every 2 weeks or so, people will review concepts a lot more

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.