CSS 343 B
Data Structures, Algorithms, And Discrete Mathematics II
Course type: Face-to-Face

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

Evaluation Delivery: Online
Evaluation Form: A
Responses: 48/55 (87% 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
4.7	**7**
(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: 5.4
(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:	48	54%	23%	15%	6%	2%		4.6	6	7
The course content was:	48	58%	21%	17%	4%			4.6	7	7
The instructor's contribution to the course was:	48	65%	17%	12%	4%	2%		4.7	6	7
The instructor's effectiveness in teaching the subject matter was:	48	62%	17%	17%	2%	2%		4.7	7	7

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:	47	11%	23%	19%	30%	11%	2%	4%	4.7	2	3
The intellectual challenge presented was:	47	40%	26%	13%	21%				6.1	8	8
The amount of effort you put into this course was:	47	43%	19%	13%	23%	2%			6.1	7	7
The amount of effort to succeed in this course was:	48	29%	35%	15%	21%				5.9	6	6
Your involvement in course (doing assignments, attending classes, etc.) was:	46	35%	24%	17%	22%			2%	5.9	5	5

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: 10.4 Hours per credit: 2.1 (N=46)

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
		11%	4%	28%	15%	11%	13%	9%	2%	4%	2%

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

Class median: 8.5 Hours per credit: 1.7 (N=46)

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
2%	4%	17%	15%	22%	13%	2%	13%	9%	2%		

What grade do you expect in this course?

Class median: 3.2 (N=46)

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
11%	20%	24%	24%	7%	4%	7%	2%					2%		

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

(N=46)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
70%	26%			4%	

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:	48	52%	27%	15%	6%			4.5	6	7
Clarity of instructor's voice was:	47	43%	26%	23%	9%			4.2	3	4
Explanations by instructor were:	48	48%	25%	17%	10%			4.4	5	6
Instructor's ability to present alternative explanations when needed was:	47	53%	23%	19%	4%			4.6	5	7
Instructor's use of examples and illustrations was:	48	56%	23%	15%	4%	2%		4.6	5	7
Quality of questions or problems raised by the instructor was:	46	61%	17%	13%	7%	2%		4.7	7	7
Student confidence in instructor's knowledge was:	47	66%	19%	13%	2%			4.7	5	6
Instructor's enthusiasm was:	47	62%	15%	19%	4%			4.7	5	6
Encouragement given students to express themselves was:	48	54%	21%	19%	4%	2%		4.6	4	6
Answers to student questions were:	48	58%	23%	15%	4%			4.6	6	7
Availability of extra help when needed was:	47	55%	28%	6%	9%	2%		4.6	5	6
Use of class time was:	47	49%	23%	23%	2%	2%		4.5	5	6
Instructor's interest in whether students learned was:	47	62%	21%	11%	6%			4.7	6	7
Amount you learned in the course was:	47	53%	28%	13%	4%	2%		4.6	6	7
Relevance and usefulness of course content were:	47	66%	17%	13%	2%	2%		4.7	7	7
Evaluative and grading techniques (tests, papers, projects, etc.) were:	48	46%	29%	21%	4%			4.4	4	5
Reasonableness of assigned work was:	47	57%	21%	13%	6%	2%		4.6	6	7
Clarity of student responsibilities and requirements was:	47	55%	21%	17%	4%	2%		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. yeah, I think so, maybe because of a lot of leetcode practice.

2. Data Structures, Algorithms, and Discrete Mathematics II is a course that typically builds upon the foundations established in a related introductory course. It delves deeper into advanced data structures, algorithm design and analysis, and discrete mathematics concepts. The level of intellectual stimulation and whether it stretches one's thinking can vary depending on several factors, including the course content, teaching methods, and individual student's background and interests.

3. Yes, It was. This class was about the algorithms and mathmestic so absolutely stretched my brain.

4. The extreme focus on high level theory was very taxing and it is hard to rationalize when it will be functionally usable in the workplace.

5. Yes it was. I was challenged every class with many new concepts, a lot very difficult to understand. Nearing the end of the quarter, it seemed like a big jump to new tough concepts that I struggled a lot with.

6. It did. The content was very interesting and the professor provided real examples of concepts in use.

7. Yes, code is very challenging like understanding a new language

8. Yes, the class activities triggered me to self-study and do research to stretch my thinking. Especially, to do weekly projects, I need to apply what I have learned in the class and outside research to understand it deeply.

9. Yes, it really taught me new coding techniques and expanded my knowledge as a whole.

10. Yes

11. n/a

12. The last section of the course was stimulating. It is new and has different concepts. However, I really wish we went over more exercises or more ways on how to tackle the problems as they are going to be on the final but we briefly covered over the topics.

13. Yes it made me think about each of the topics we covered and required learning outside of class too. Made me want to learn more.

14. This class wasn't really intellectually stimulating because it was mostly lecture.

15. The homework assignments were very helpful to my learning experience. It helped me to apply the things that I have learned in lecture

16. yes. all assignment projects improve my knowledge of data structure and algorithms. I had to take more time to solve problems and have discussions with friends

17. This class was quite intellectually stimulating. The course covered a lot of new material I hadn't learned before, and went much more in depth into the topics covered in 342.

18. There was a ton of information for me for a short period of time and professor Pisan did an incredible job explaining it all to us during his lectures through slides, drawing data structures on whiteboard, as well as answering all students' questions. Honestly I still believe that professor Pisan is one of the best professors in UW. His lectures matters a lot for us as he explains all the hardest topics during one quarter.

19. Something that was intellectually stimulating was the LeetCode problems we have done throughout the quarter. I felt like doing LeetCode problems help me understand various methods of solving a problem as well as practicing for coding interviews.

20. The class was intellectually stimulating because it introduced many concepts that were then sometimes practiced in LeetCode. LeetCode exercises often stretch my thinking but help me understand why certain algorithms or data structures are used.

21. The instructor provided us with exercises that strengthened our knowledge.

22. Yes, because there is a lot of new material.

23. Yes, it was intellectually stimulating. Doing projects and solving leetcode problems together in class both stretched my thinking and helped me learn the course content.

24. Yes. Yes. Material was more advanced than has been covered by any course thus far except for CSS 422.

25. Yeah, The class structure and course materials were really interesting. Some of the assignments really needed a deep understanding of the project.

26. I think this class was generally harder than most of the other classes I have taken. It was definitely interesting to learn about, but hopefully I can continue to get better at the topics presented in the class in the future.

27. Yes, there were many new concepts that I had to learn and apply it to real world problems.

28. Yes it was challenging

29. yes this class I learned a lot, learned how to use git and got good practice with leet code

30. I absolutely loved your class. I learned a lot about OOP principles and got to patch a bunch of holes from 342. For example, my 342 professor never covered vectors, so when I came into 343 I didn't know basic vector usage. That's just one simple example. As for stretching my thinking, yes. The leetcode problems did that.

31. The Leetcode was the most intellectually stimulating activity in the course. I did not have Leetcode experience before this class, but it really put me in a situation to think fast and accurately(which most times I did not).

32. It did. I was introduced to new concepts I had never encountered before

What aspects of this class contributed most to your learning?

1. the leetcode practice

2. Algorithm Analysis, Advanced Topics, Problem-Solving Skills, Practical Implementation

3. the leetcode pratice

4. Assignments

5. LeetCode problems were very good.

6. Professor Pisan would challenge us with guided considerations which made us think in a certain way. Using that, he helped us wrap our head around concepts by getting our head in the right direction before moving forward. It was different than some classes where we focus on conceptual idea rather than application as well. It was an excellent balance. But honestly the panopto recordings contributed the most to my learning. I didn't come to class often. I'm exhausted from work and my other courses, another of which I was immensely struggling in despite putting in over 20 hours a week. I became embarrassed to attend class because I had skipped so many, but Professor Pisan kept recording his lectures, allowing me to at least TRY to keep up. I appreciate that. Listening to the same lecture TWICE is extremely effective for me.

7. The coding homework projects, the inclass problems

8. leetcode problems are very helpful for future job interview. Therefore, I am able to have a good preparation for future career.

9. Lessons and how accessible the teacher was on.

10. The lecture slides and explainations provided in class as well as the practice tests for the midterm/final

11. n/a

12. Organization of the course

13. In class exercises.

14. What contributed most to my learning was being able to return to class recordings

15. I loved how the instructor was able to answer everyone's questions thoroughly.

16. assignment projects, leetcode, lecture example programming.

17. The lectures contributed the most. I also found it extremely helpful that the midterm and final both have example practice problems. Although I didn't do as well as I wanted on the midterm, I found the content extremely reasonable and it was only on me for not reviewing more.

19. The overall course material and the way the material was being taught help me a lot. There were various thing that helped me have a better time than 343 last quarter.

20. One aspect of this class that contributed most to my learning was the LeetCode exercises.

21. The leetcode exercises and the lectures

22. Lecturing and working on example problems as a class.

23. Doing projects, and solving Leetcode questions together in class.

24. In-class programming exercises.

25. The leet code problems done in class were something that I find very helpful.

26. I think it was the lectures presented. They were very well organized.

27. The teaching is great.

28. Practical examples

29. what contributed most to my learning was leet code questions and solving them on our own in class , stretched thinking.

30. LeetCode Problems and your ability to help us over Discord.

31. Using the large data set of every city on Earth was something new to me. In other coding assignments, I haven't really been asked to code decent software to interact with the database. The final project was also a great way to push off my skills I've learned in 350, 360, 370 and apply them to a project built from the ground up.

32. Leetcode was the most straight forward contribution

What aspects of this class detracted from your learning?

1. nothing

2. NA

3. the FSM waste my time a lot

4. The expectation to do Leetcode Mediums blind with 10 minutes of class time is unreasonable and counter intuitive to the process of actually properly utilizing Leetcode.

5. Some of the projects were not easy to understand and apply my learning from class to. Projects were very much on your own and didnt seem like the correct translation from class learning to individual work.

6. Nothing. His lectures are engaging and interesting. Professor Pisan has an excellent pace with his lectures.

7. none,

8. nothing

9. Nothing

10. Nothing

11. n/a

12. A little lack of group/individual exercises during the last topic of the curriculum

13. None.

14. What really detracted from my learning was not being able to see the white board in class recordings

15. None

16. nothing

17. Nothing detracted my learning. I think the pace was a bit quick, but I could've dedicated more time to understand and I wouldn't change anything about the course itself.

19. Sometimes the professor stutters a little bit and it can make it hard to understand him but that is something that is very negligable.

20. One aspect of this class that detracted was the homework assignments; the ideas were fun but the difficulty made it feel like I was more just struggling through than learning.

21. non

22. None

23. Nothing.

24. Other students not quietly returning to class from breaks. The professor always addressed this issue, but it nonetheless took time and focus away from the course.

25. NA

26. Nothing

27. Leet Code problems

28. Hard homework

29. I feel at times we went too fast especially for beginners who don't really have experience with leetcode

30. At times I felt like you didn't enjoy having us as students. You would get peeved when we had trouble with LeetCode questions. That at times made me a little hesitant to ask questions in class. Furthermore, I would've liked it if you remembered some students names but that's just me being picky. Overall you were an excellent professor and teacher.

31. Outside responsibilities and my lack of effort to be present in class. I'm sorry for that. This course was one the best courses to prepare me for my career and it was because of your passion and structure of the course.

32. Projects due before exam

What suggestions do you have for improving the class?

1. everything is good

2. NA

3. should give us the pratice for exam sooner

4. More focus on Data Structures / Algorithms and less focus on high level theory that was covered in the final month of the class.

5. Going over the project and helping students understand it more clearly. Also better helping students understand what will be on the midterm and final, final especially is really hard to figure what to study and focus on.

6. The only suggestion I could make is that often times professors are too smart, and skip small steps. Most of the time, its no problem. But sometimes, when you're struggling, that little skip can make the difference between understanding a problem on the spot, and struggling with it for 30 minutes. Such as when the very beginning of an example is only explained verbally. If I miss 5 seconds of the preface, I'm struggling the entirety of the example because we won't go back into the "why". But that's only because I have trouble listening, so it might not apply to other students.

7. none

8. I do not have any suggestion, just love the way it is. Hopefully I can take another class of professor Pisan again.

9. Nothing

10. The lecture slides where you have example questions or a moment to consider a scenario, put the answer to those questions somewhere so we can confirm our answers somewhere

11. n/a

13. N/A

14. I would suggest trying to show what is being written on the whiteboard, either in recordings or in discord

16. give extra time to practice reviewing midterm and final exams. The rate percent of exams make up in the grade is very high so we need to clarify what include in exams before the lecture. There are so many student who drop class due to this point

17. Having the final project and the final exam being so close to each other is a bit stressful, so potentially giving more room between these dates.

19. n/a

20. No suggestions.

21. none

22. The review before midterm and final was very helpful.

23. More midterm and final practice questions. And getting rid of Clang-tidy

24. More group work like the last programming assignment.

25. NA

26. Spend a bit more time on test prep so students feel more comfortable with the test

27. None.

28. Easier homework

29. I feel after final we went too fast and different examples of Turing machine , fast, and new concepts like FSA and N FSA maybe breaking them down

30. As I said above remembering names but that's minor. You were one of the best professors I've had in CS.

31. Nothing. The course started off slow and picked up pace for a few weeks, then during the middle of the quarter. There wasn't much to do for course assignments. I do think making another assignment might be helpful(could even be extra credit or something that isn't required).

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.