

CSS 343 B
Data Structures, Algorithms, And Discrete Mathematics II
Course type: Unknown
Taught by: Yusuf Pisan
Instructor Evaluated: Yusuf Pisan-Assoc T Prof

Evaluation Delivery: Online
Evaluation Form: A
Responses: 36/38 (95% 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
4.1	4
(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: 5.2
(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 College
The course as a whole was:	36	31%	39%	25%	3%	3%		4.0	4 5
The course content was:	36	31%	33%	28%	8%			3.9	2 3
The instructor's contribution to the course was:	36	44%	28%	25%	3%			4.3	3 4
The instructor's effectiveness in teaching the subject matter was:	36	39%	36%	17%	6%	3%		4.2	3 4

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 College
Do you expect your grade in this course to be:	36	8%	22%	11%	33%	11%	11%	3%	4.2	1 2
The intellectual challenge presented was:	36	19%	44%	28%	8%				5.8	6 6
The amount of effort you put into this course was:	36	22%	25%	33%	17%	3%			5.4	3 3
The amount of effort to succeed in this course was:	36	19%	36%	31%	14%				5.7	5 4
Your involvement in course (doing assignments, attending classes, etc.) was:	36	22%	42%	14%	22%				5.8	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: 9.1 Hours per credit: 1.8 (N=35)

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%	11%	17%	23%	23%	9%	6%	3%	3%		3%

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

Class median: 7.9 Hours per credit: 1.6 (N=35)

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%	23%	14%	34%	9%		6%	6%			3%

What grade do you expect in this course?

Class median: 3.6 (N=35)

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
29%	37%	9%	6%	6%	9%			3%						3%

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

(N=35)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
63%	34%			3%	

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:	36	33%	33%	25%	3%	6%		4.0	3	5
Clarity of instructor's voice was:	36	19%	42%	22%	11%	6%		3.8	1	2
Explanations by instructor were:	36	22%	47%	22%	3%	6%		3.9	2	3
Instructor's ability to present alternative explanations when needed was:	36	33%	39%	19%	3%	6%		4.1	3	4
Instructor's use of examples and illustrations was:	36	33%	39%	19%	3%	6%		4.1	2	3
Quality of questions or problems raised by the instructor was:	36	31%	39%	25%	3%	3%		4.0	3	4
Student confidence in instructor's knowledge was:	36	58%	22%	14%	3%	3%		4.6	4	5
Instructor's enthusiasm was:	36	56%	31%	8%	3%	3%		4.6	4	5
Encouragement given students to express themselves was:	36	42%	33%	17%	6%	3%		4.2	3	4
Answers to student questions were:	36	31%	42%	17%	8%	3%		4.0	2	3
Availability of extra help when needed was:	36	33%	42%	17%	3%	6%		4.1	2	3
Use of class time was:	36	36%	33%	25%	3%	3%		4.1	3	4
Instructor's interest in whether students learned was:	36	33%	42%	14%	8%	3%		4.1	2	3
Amount you learned in the course was:	36	25%	42%	28%		6%		3.9	2	3
Relevance and usefulness of course content were:	36	47%	33%	11%	6%	3%		4.4	4	5
Evaluative and grading techniques (tests, papers, projects, etc.) were:	36	31%	44%	11%	6%	8%		4.1	3	4
Reasonableness of assigned work was:	36	25%	44%	19%	8%	3%		3.9	2	3
Clarity of student responsibilities and requirements was:	36	44%	33%	17%	3%	3%		4.3	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
2. Very much so. Lots of concepts and exercises required a stretch of thinking.
3. yes it forced me to stretch my thinking and use critical thinking skills
4. This class was very intellectually stimulating, I learned a lot of new things, especially pertaining to graphs. Learning them conceptually first required me to stretch my thinking and fully understand it rather than just memorize a snippet of code.
6. Yes, the class was intellectually stimulating. There were many technical and complex topics covered that required critical thinking.
7. The leetcode problems definitely stretched my thinking. I also enjoyed working on the projects and found the grading process (through self-evaluation) very helpful.
9. Yes, I think this may be the hardest class for me potentially the rest of my degree. I found that I picked up implementing the concepts slower than I usually pick up content & along with a busy work schedule, I struggled to keep up with implementing.
11. Yes the projects were very helpful
12. -
13. The class topics were interesting. In class leetcodes were great.
14. Completing LeetCode assignments in class was stimulating because we had only a few minutes to find the answer, which helped improve our ability to think quickly. The assigned projects were also intellectually stimulating as they required debugging and problem-solving skills.
15. Yes, it did since it built on CSS 342 and also had more variety in the topics explored in class.
16. Yes I liked it. Interesting concepts.
17. This course stretched my thinking by teaching many new and important concepts in computer science.
18. This class was intellectually stimulating and it did stretch my thinking. Learning about different algorithms and especially doing the LeetCode problems gave me made it easier to learn by trying to apply the knowledge in a small problem.
19. Yes, because of working on projects.
20. Yes it was stimulating but there should be more stuff to do outside of class
21. Yes. Mainly because of the involvement of leet code exercises. There were also class exercises that brought class discussion about the problems and ways to solve them.
22. It definitely required out of the box thinking.
23. Professor Pisan taught us many data structures and algorithms that are essential for technical interviews. The leetcodes we did in class were also helpful in this regard.
24. Yes, this class made me think a lot. It was a very difficult class for me trying to understand the data structures and how to code them was not easy.
25. Yes it did, the courses projects are challenging in a good way and make you create unique solutions to interesting problems. The LeetCode exercises helped show the practical application of the topics covered.
26. I think that this class stretched my thinking as the concepts were complex and not easy to understand.
27. Yes it was.
28. This class was intellectually stimulating. I now have a better intuition for what data structures to use in which context and how to better implement polymorphism.
29. Yes, using Leetcode was challenging. I wish we learned a few more data structures.
30. No, it felt like the concepts were either hit or miss. I either understood it well and it was super easy or I was completely lost.

What aspects of this class contributed most to your learning?

1. Hands-on in-class activities
2. Definitely the coding projects and in-class exercises. These let me to apply what I learned in lecture.
3. leet code problems helped me get more familiar with those type of problems. the study guide was helpful as well
4. Going through examples as a class during lecture contributed the most to my learning. It solidified the content on the presentation slides and cleared up any misunderstandings I may have had. As such, I would say coming to class is necessary to fully succeed in this course.
5. I really appreciated how you tried to make the tests less terrifying by offering encouragement and the bonus duck question. This really helped me calm down before taking the exam (at least for the midterm).

6. The coding projects contributed to my learning the most. They allowed me to work at my own pace and they covered the topics being learned in class at that time. Also, it is a practical way of getting experience with programming. Similar to that, the in class leetcode problems were useful because they are a practical way of engaging with computer science and the course material. A tip on how to succeed in this course would be to practice leetcode problems on your own time to get experience with timed programming and programming concepts.
7. Mainly reviewing the slides and making sure I understood their main topics.
8. Projects
9. I think the conceptual overviews spoken of over class really helped me. I only faired okay on the mid-term, but conceptually I feel completely sound. In my history, I've typically been slower to pick up the concepts in-code, but overall Professor Pisan had a great attitude and taught the concepts exceptionally. The lower mid-term grade is completely on my lack of implementing success.
11. The projects were very important to my learning
12. -
13. In Class Leetcodes and on exam leetcodes felt very relevant to prepping for technical interviews. Movies Project was appropriately difficult and allowed practice of a very broad spectrum of topics like OO design, polymorphism and design patterns.
14. In class assignments and in class exercises and their explanations were the most useful.
15. I believe the class examples and the slides. I was able to look back at the class slides and figure out the assignments and how to study for tests.
16. I liked the leetcodes, but maybe make them more related to what we were going over that day. Sometime we just got random leetcodes not related to class content.
17. The Leetcode problems and the programming assignments.
18. The lectures and extra help when needed mostly contributed to my learning.
19. The projects because they were intellectually stimulating and a good challenge
20. Doing leetcode exercises and doing activities to help understand abstract ideas
21. Class exercises and leet code problems
22. Really talking in-depth about concepts and doing small coding problems based around those topics.
23. The homework assignments were very useful for contributing to my learning, save for the last one, they were not overwhelming, and they were straight forward.
24. The lectures.
25. The projects and LeetCode.
26. I think the leetcode excersices and the classes where we learned new concepts were the most contribution to my learning.
27. Practice test.
28. In-class activities contributed most to my learning.
29. Leetcode and project assignments.
30. Getting the chance to work on Leetcode problems in class with guidance available was really valuable to me. They helped me see basic patterns and how I could implement them

What aspects of this class detracted from your learning?

1. Too much emphasis on Leetcode problems
2. I can't think of any
4. Nothing
6. Some in class presentation topics felt like they were not covered thoroughly enough, and I would have to review them on my own time to learn it.
9. I think the class was formatted very well & there were no real detractions. The only issue I personally had was preparing more conceptually than implementation wise for the mid-term. I just had the wrong focus point.
11. None
12. -
13. The class is overly theoretical and exam focused. Homework (except for movies project) felt repetitive, implementing STL data structures and well documented algorithms. Regex was covered, but only on paper and zero time was given to when to use them, and how to within c++ or other languages. Important C++ and general programming topics like Lambdas, unordered_map syntax and regex were ignored in favor of theory. like Turing machines and finite state machines. While important, this seems misaligned with most student's goals of entering industry. This left me feeling unprepared for enterprise level work and more advanced development. Github classroom, while interesting required more time on figuring it out than just submitting a .zip or using a personal repo.
14. Sometimes the topics felt a little too abstract, and it required deep self learning to fully understand the topic.
15. Nothing.
16. It was easy to lose attention during lectures and then you would get left behind very quick. I had to do a lot of learning outside of class but that might just be a me issue.
17. None.
18. Nothing detracted from my learning.
20. Too many leetcodes iin a row sometimes during class
21. N/A

23. Professor Pisan taught lots of computer science topics and concepts such as turing machines and state machines, however not much context was given as to why we are learning these things and what they are applied to, making it hard to follow.
24. None that I can think of.
25. Nothing I can think of
26. I think it would be helpful to talk about how to identify which kind of problem it was, greedy, DFS,BFS.
27. I would have liked a little more theory. The teaching style made sense if you already had a general idea of the concept, if you were hearing it for the first time it was definitely confusing.
28. There was no noticeable aspect of this class that detracted from my learning.
29. Lack of in-class "checkpoints." It was difficult to track the amount of information I learned until I received feedback after midterms.
30. The slides could use a lot of improvement in my opinion. I took a data structures and algorithms class at another college and the main difference I would say is that the slides at the other college were much easier to understand. The best slides are those that make good use of the instructor's nuance. Dumb it down for us. Take into account what questions student's have had in the past and maybe adjust the lesson.

What suggestions do you have for improving the class?

1. Not being allowed to access the restroom during the exam is not fair. This is the only class with such a rule so far.
2. It would be difficult to implement, but slightly more time for coding projects might be helpful
3. having mini quizzes every so week instead of a midterm so we can better grasp the material throughout the quarter. or have optional practice worksheets to take home so we can practice.
4. I enjoyed working together with partners so more opportunities to do that would be nice.
6. Make some of the leetcode examples in class easier. Some of the leetcode problems felt too difficult to the point where I gained nothing from even attempting them.
7. It might be helpful for students if slides are posted a few days before the lecture.
9. I would've loved to have almost like a cheat sheet for "most important ways to traverse a tree" or a graph or the sorts. I get a little overwhelmed at all the different ways to move through the different structures, that I almost don't know where to start sometimes.
10. There needs to be clearer expectations for the graders, which is true for every class when using graders. Every experience I have had with a grader grading my work has been poor compared to the instructor grading my work.
11. None overall great class
12. -
13. Instead of focusing so heavily on exams, focus more on heavy, difficult assignments. Something like the movies assignment every week or so with less weight placed on exams and theory. Professor could have spent more time on how to use less on how it works in theory. For example, regex, a useful c++ feature, was only covered with how it works with finite state machines, and no time was given to when to use it or how in code. Similarly professor expected students to know most stl data structures when other instructors did not go over them like `std::unordered_map`
14. Giving multiple examples and exercise when topics which are too abstract.
15. More time to ask questions in class.
16. Don't have movies project due same week as finals.
17. None.
18. I don't have any suggestions! The class overall was really fantastic, I enjoyed learning a lot. The LeetCode problems were a lot of fun and it was really easy to study the concepts learn and apply them. The projects were not too difficult and the class was simply great overall.
20. Having more assignments that reinforce what was learned in class
21. N/A
22. More LeetCode
23. There was a 2 week period where we had no homework assignments due. However, the last the project was due 1 day before the final, leaving little time to study for the exam. This may have been because polymorphism was taught late into the quarter. If the professor moved the lectures around so we did polymorphism sooner, and made the final project due 1 week sooner, more time would be allowed to study for the final exam.
24. Take some more time especially in the beginning of the class to explain the code for trees.
25. Possibly giving some LeetCode expectations for the tests. The LeetCode questions on the test are very challenging so maybe providing some practice ones on the sample tests would be beneficial.
26. I suggest that we also learn about red black trees as they are cool and interesting.
27. On the PowerPoint slides, don't just include the question or exercise. Also, provide the worked-out answer. This way, when reviewing the problem, there is a better frame of reference for how the professor worked through it.
28. I think the class is structured well :)
29. Weekly/bi-weekly quizzes. Not worth too many points so it does not stress students too much, but enough for students to know if they are actually learning class content.
30. I hated the movies assignment, maybe that's not something you can get rid of exactly but I definitely think the instructions for that assignment could be made easier to understand. But one thing i am sure about is that we sped through the last content too fast and it didn't stick very well. I think we should've spent more time on the last things like languages, turing machines, regex, patterns, etc. That stuff took a lot more effort and time to understand well and it felt super rushed. It would be fine with me if we weren't tested on it so heavily but we are.
31. More time spend covering B+ trees would be helpful.

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.