

CSS 343 A
Data Structures, Algorithms, And Discrete Mathematics II
Course type: Face-to-Face
Taught by: Yusuf Pisan
Instructor Evaluated: Yusuf Pisan-Lecturer

Evaluation Delivery: Online
Evaluation Form: D
Responses: 16/22 (73% 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 4.4 (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: 5.8 (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	44%	38%	19%				4.3	5	6
The course content was:	16	50%	38%	12%				4.5	6	7
The instructor's contribution to the course was:	16	50%	38%	12%				4.5	4	5
The instructor's effectiveness in teaching the subject matter was:	16	38%	50%	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%	6%	25%	31%			4.2	1	1
The intellectual challenge presented was:	16	25%	50%	6%	12%	6%			6.0	8	7
The amount of effort you put into this course was:	16	31%	50%	6%	12%				6.1	7	7
The amount of effort to succeed in this course was:	16	44%	44%	6%	6%				6.4	8	8
Your involvement in course (doing assignments, attending classes, etc.) was:	16	44%	31%	12%	12%				6.3	7	7

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: 13.5 Hours per credit: 2.7 (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%	12%		19%	12%	25%	6%	6%		12%

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

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
		12%	19%	6%	25%	19%	6%	6%	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%	6%	6%	6%	12%	12%			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
62%	31%			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	44%	44%	12%				4.4	5	6
Sequential presentation of concepts was:	16	44%	38%	19%				4.3	6	6
Explanations by instructor were:	15	40%	27%	33%				4.1	4	4
Instructor's ability to present alternative explanations when needed was:	16	44%	38%	12%	6%			4.3	4	5
Instructor's use of examples and illustrations was:	16	56%	38%	6%				4.6	6	6
Quality of questions or problems raised by the instructor was:	16	69%	25%	6%				4.8	8	8
Contribution of assignments to understanding course content was:	16	50%	44%	6%				4.5	7	7
Instructor's enthusiasm was:	16	56%	25%	19%				4.6	4	4
Instructor's ability to deal with student difficulties was:	16	50%	25%	12%	12%			4.5	6	6
Answers to student questions were:	16	44%	44%	12%				4.4	4	5
Availability of extra help when needed was:	16	56%	25%	12%	6%			4.6	5	6
Use of class time was:	16	62%	12%	25%				4.7	7	7
Instructor's interest in whether students learned was:	16	62%	19%	19%				4.7	6	7
Amount you learned in the course was:	16	44%	38%	19%				4.3	5	5
Relevance and usefulness of course content were:	16	56%	44%					4.6	6	6
Evaluative and grading techniques (tests, papers, projects, etc.) were:	16	50%	38%	6%	6%			4.5	6	6
Reasonableness of assigned work was:	16	44%	38%	19%				4.3	5	5
Clarity of student responsibilities and requirements was:	16	44%	38%	12%		6%		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, some of the programs were quite tough
2. This class was very intellectually stimulating.
3. Honestly, this class was mostly repeat for me, but because you focused on things in addition to the material (clang-tidy, github usage, etc.) I gained valuable knowledge.
4. This class pushed me to be even more intentional about how I implement programs and gave me the tools to find a better balance between functionality and efficiency. I now own a copy of Design Patterns and will likely reference it for the duration of my career. After this class, I now feel like I finally have all the tools in my toolkit to be prepared for interview questions to get into the industry. Beyond now being aware of concepts that used to mystify me just months ago, I know to apply them and would feel confident implementing them in a whiteboard question or later on in the field.
5. I believe that it did in the sense of we had to do interview questions for computer internships, which is very helpful when we have to go to these interviews.
6. This class was intellectually stimulating. Many of the assignment and in class work were very challenging and were quite enjoyable.
8. This class was stimulating, Some topics were hard to grasp and caused some students to think outside of the box which helped further my education.
9. Yes, it stretched my thinking during the class activities. And just listening to the lectures really made me think about all the possibilities and real world scenarios where things were used. Specially during the finite state machines.
10. CSS 343 is a difficult class but the content covered is valuable to the field I want to go into.
11. Yes, helped me learn c++
12. This class was quite challenging and a few topics were hard to understand, but the professor was able to address any questioned students may have had
13. Yes, The pace of the course was well-planned to introduce new concepts in a fast-paced manner and challenge students to keep up with self-studies and lectures.

What aspects of this class contributed most to your learning?

1. working on programs
2. The in-class activities contributed most to my learning in this class.
3. The amount of effort you put into creating and providing organized resources and being available outside of class. The very readable lectures, the relevant exercises. The good practice exam. The clarity of homework parameters. The good lecture timing. I'd I could go on and on, you are by far the top instructor I've had.
4. - Thoroughly reading the (very well written and easy to follow) textbook provided a great foundation of knowledge - In-class activities and in-depth lectures made the knowledge more concrete than abstract - Projects were the best way for me to solidify and apply the knowledge
5. Having to do many different assignment's based around data structures and implementing the object-oriented programming principles (Encapsulation, Inheritance, Abstraction)
6. Lectures and Assignments
7. The assignments contributed most to my learning.
8. Doing practice problems in class, the visualizations for different sorting algorithms and searches.
9. I feel like the class activities and homework contributed greatly to my learning, because it allowed me to get some hands on experience.
10. Class was very organized, assignments were very well documented and executed.
11. The in class lessons
12. In class examples proved to be quite helpful for my learning
13. The lectures themselves were the most helpful; Professor Pisan is a skilled lecturer and actively demonstrates the topics being taught on the whiteboard and through online simulations, and these visual supplements were very helpful for my learning.

What aspects of this class detracted from your learning?

1. nothing, went great
2. The requirement of learning a new tool with no instructions detracted the most from my learning.
3. None
4. Other students talking in class, making it difficult to pay attention to or hear a lecture

5. I think having a partner for the final project was not a good idea, I should have done the entire final project by myself. I like the groups for designing it though.
6. I was missing some for of debugging software that I felt as though I should have had. (In hind sight I wish I had just asked) Because I did not have a debugger, this double if not tripled the time I spent on several assignments. If we are supposed to have access to a debugger, I hope he could clarify that in the future with students and possibly ensure they are using one.
8. How heavy the points are worth on programs. I made one mistake and it dropped my grade drastically. After that I debated dropping the course in fear of failing the course all in all.
9. Nothing really.
10. Nothing, Pisan is an excellent instructor.
11. -
12. None
13. The odd placement of desks cause many students to choose between sitting far from the instructor or sitting facing the wrong direction. Other than that, none.

What suggestions do you have for improving the class?

1. really enjoyed the class
2. I would suggest more written instructions around setting up clang_tidy.
3. Only thing I can think of is getting assignment grades out earlier, but meaningful improvement? idk, you're pretty good.
4. Keep up the good work. Here are things about the class I felt were done right: - the amount of structure kept me on-track all quarter - the quizzes and expectation of being able to apply the knowledge during in-class activities made it so that I always thoroughly read each chapter - the lectures have a lot of really good pro-tips for project implementation, plus a good balance of lecture and applied activities, which I think motivates students to pay attention more so than other classes - the use of tools that I would have otherwise been unfamiliar with, such as valgrind, clang, and travisCI, has prepared me for standards in the industry and has been a great resource for optimizations I might not have known existed or debugging I didn't know needed to be debugged
5. I really like the way this class is set up and wouldn't change that much more than the final project.
8. Maybe giving some more time for students on programs since there is a huge learning curve. Making the programs worth more than just 20 points so that loosing one point wont be too drastic
9. I felt like the amount of time provided for each class activity was sometimes short. SO maybe providing more time on class activity would be nice.
10. I have no suggestions, Pisan is doing a great job.
11. -
12. None
13. I feel that the topics taught during the last 2-3 weeks of class (reguar expressions, finite machines, turing machine) could use more time, and that balanced trees didn't quite need so much time allocated for them.

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.