COURSE SUMMARY REPORT
Numeric Responses

University of Washington, Bothell
Sci, Tech, Engr. & Math
Science, Tech, Engr. & Math
Term: Winter 2018

IASystem
The Course Evaluation Standard

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: 28/40 (70% 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
4.4	**6**
(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	DECILE RANK College
The course as a whole was:	28	43%	39%	14%			4%	4.3	5	6
The course content was:	28	46%	39%	11%			4%	4.4	6	6
The instructor's contribution to the course was:	28	43%	43%	7%	4%		4%	4.3	4	4
The instructor's effectiveness in teaching the subject matter was:	28	50%	29%	14%	4%		4%	4.5	5	6

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:	27	22%	11%	22%	33%	7%		4%	4.8	2	3
The intellectual challenge presented was:	27	15%	37%	26%	22%				5.5	4	3
The amount of effort you put into this course was:	27	19%	37%	19%	26%				5.7	4	3
The amount of effort to succeed in this course was:	27	22%	33%	30%	11%	4%			5.7	4	3
Your involvement in course (doing assignments, attending classes, etc.) was:	27	33%	30%	30%	7%				5.9	5	4

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: 12.5 Hours per credit: 2.5 (N=26)

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
4%	4%	4%	15%	8%	12%	8%	15%	15%	4%	4%	8%

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=26)

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
8%		19%	15%	15%	4%	4%	19%	8%	4%		4%

What grade do you expect in this course?

Class median: 3.3 (N=26)

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
19%	23%	19%	19%	4%	8%	4%					4%			

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

(N=26)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
54%	31%		4%	12%	

COURSE SUMMARY REPORT
Numeric Responses

University of Washington, Bothell
Sci, Tech, Engr. & Math
Science, Tech, Engr. & Math
Term: Winter 2018

IASystem
The Course Evaluation Standard

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:	27	44%	37%	11%	4%		4%	4.3	5	6
Sequential presentation of concepts was:	27	44%	37%	15%			4%	4.3	6	6
Explanations by instructor were:	27	48%	33%	11%	4%		4%	4.4	5	6
Instructor's ability to present alternative explanations when needed was:	27	52%	22%	15%	4%	4%	4%	4.5	5	6
Instructor's use of examples and illustrations was:	27	52%	26%	19%			4%	4.5	5	6
Quality of questions or problems raised by the instructor was:	27	44%	33%	15%	4%		4%	4.3	4	5
Contribution of assignments to understanding course content was:	27	44%	33%	15%		4%	4%	4.3	6	6
Instructor's enthusiasm was:	27	52%	37%	7%			4%	4.5	3	4
Instructor's ability to deal with student difficulties was:	27	37%	41%	15%	4%		4%	4.2	4	4
Answers to student questions were:	27	33%	44%	19%			4%	4.1	3	4
Availability of extra help when needed was:	27	41%	37%	19%			4%	4.2	3	4
Use of class time was:	27	59%	33%	4%			4%	4.7	7	7
Instructor's interest in whether students learned was:	27	48%	30%	15%	4%		4%	4.4	4	4
Amount you learned in the course was:	27	41%	37%	15%	4%		4%	4.2	5	5
Relevance and usefulness of course content were:	27	48%	37%	11%			4%	4.5	5	5
Evaluative and grading techniques (tests, papers, projects, etc.) were:	27	37%	26%	22%	7%	4%	4%	4.0	3	4
Reasonableness of assigned work was:	26	50%	35%	12%			4%	4.5	6	6
Clarity of student responsibilities and requirements was:	27	44%	41%	7%	4%		4%	4.4	4	5

COURSE SUMMARY REPORT
Student Comments

University of Washington, Bothell
Sci, Tech, Engr. & Math
Science, Tech, Engr. & Math
Term: Winter 2018

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

Evaluation Delivery: Online
Evaluation Form: D
Responses: 28/40 (70% high)

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

STANDARD OPEN-ENDED QUESTIONS

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

1. Yes, it did. The course content is very challenging to understand.

3. This class was very intellectually stimulating because of the in-class group exercises and labs. Emphasis on the in-class group exercises helped me a lot.

4. This class was very interesting, and it gave me a new perspective on the topics taught. This is because the material was relative and essential to the major. Also, Professor Pisan gave various real-world examples of how the topics are applied.

5. Yes, in that we had to do a little of our own research to get some of the homework done. Dr. Pisan provided hints in the lecture, but didn't provide everything. Therefore, we had to do our own thinking.

6. The assignments that were given forced me to think every step through. Nothing was as simple as "googling it". Many of the issues i ran into, on all of my assignments, caused me to, not only, gain an understanding of the various algorithms, but also a deep understanding of the c++ standard library.

7. Yes, many difficult concepts that needed thinking to wrap your had around.

8. Yes, because it exposed me to new structures I was not familiar with

9. Yes. Lots of data structures and algorithms.

10. Yes it definitely was. A lot of the things I learnt from this class really helped me when I am programming. Whether it is learning about data structures, debugging, or generally understanding more about algorithms

11. Yes, I think that we covered some very important data structures and algorithms, especially with the BSTs, Dijkstra's, and Hash Tables.

12. Yes, I learned new material

13. The course taught me more concepts relating to data structures and algorithms.

14. Meh

16. It was very stimulating; however, it was hard to keep up with. This was actually due to the fact that I was not supposed to be in this class to begin with.

18. A little? Assignments weren't too hard and material wasn't too difficult to understand.

19. Yes, but since the material was pretty straightforward I don't particularly feel so.

20. Yes, the concepts were very challenging and interesting.

21. This class was very intellectually stimulating. The real world algorithms and concepts examined for very interesting and they approved my ability to understand and craft algorithms.

22. Worst teacher i ever met, condescending, treats us like we are in high school.

What aspects of this class contributed most to your learning?

1. Classwork

3. The in-class group exercises and lectures.

4. Professor Pisan's willingness to help students learn and the way he encouraged students to collaborate with one another was very helpful for my success in this course. Both teaching and learning from other students helped to instill the material that Professor Pisan taught us. Also, it is clear that he is passionate about the material which makes his lectures enjoyable. His in-class group exercises are very good and they make it much easier to learn and remember the material.

5. The in-class practice.

6. The lectures were where I gained the most knowledge. The way that Pisan presented topics made it easy to understand topics. Even ones that were tough! The assignments were a great way to learn applied algorithms, but the theory behind it is more important.

7. Attended lectures was a must to understand difficult algorithms and theroies.

8. In-class exercises were helpful to understanding course content

9. The assignments, and class exercises.

10. The availability of help in slack was very useful. Also the fact that the professor allowed us to pick the topics to review was very helpful.

11. The lectures were very helpful, probably more so than the assignments themselves because the concept was more important than the actual implementation. That being said, the assignments also helped solidify the concepts, so they contributed to a lesser degree. Slack was also helpful for collaboration when stuck on the assignments.

12. The homework assignments

13. The in class exercises and examples as well as the book

14. Class lecture

16. The thing that made the biggest difference in keeping me in this class was the teacher. Professor Pisan's teaching style was what I was looking for, because he gives both explanations AND examples to further my understanding of a given topic.

17. I really liked the automated Jolly Feedback for the assignments, especially with the opportunity to see that feedback before the assignment is due. I liked that we used Slack instead of Canvas to do our online discussions. It may have been busier, and harder to find info, but that's a symptom of a system that more people use more often because they like it.

18. The assignments were fair (minus Dijkstra's)

19. The in class exercises helped me understand few materials better.

20. The diagrams on the board and class practice activities.

21. The in class exercises on the different concepts helped tremendously in understanding the different concepts

22. forces students to interact or takes points off as a participation. I signed up to learn programming not join a cult.

What aspects of this class detracted from your learning?

1. Complex concepts

3. Nothing

4. Some of the assignments required more learning about material we did not cover rather than the material that we did cover. For example, one assignment focused on Dijkstra's Algorithm, but it seems that quite a few of us spent more time learning how to use a map(which was not covered in class) than we did on implementing the algorithm. Also, the textbook required is not helpful at all. There are many other textbooks out there that are way better. Honestly, I have learned more from a few pages of the Cracking the Coding Interview book than I have in entire chapters of this one.

6. Some of the students, but you can't do anything about that.

7. None.

8. The textbook added no value to my understanding of the course content

9. The class participation essay.

10. Lecture slides could use a little more details in some slides (like hashtable slide for example)

11. Some in-class sample problems take too long to complete; it feels like the time spent on those problems could have been used elsewhere.

12. N/A

14. Nah

16. The lack of prior knowledge needed for the topics taught.

17. The projector in the classroom seems to be out of focus and blurry. It could also be made to project a larger image on the screen as it only takes up about 2/3 of the projector screen.

18. Lectures were a little hard to sit though, but that might be partially because wits late at night. Didn't like the group assignment and I thought it didn't help me much for the assignment. Required book is not helpful at all. Unused a different, better book instead.

19. None in particular.

21. Nothing in particular detracted from my learning

22. Everything, mandatory to show up to class or lose 10% of total grade. Required to use online platform that did not help me at all. Felt much like a high school class than a CS class.

What suggestions do you have for improving the class?

1. Keep up the class work. More emphasis on design part can be effective too.

3. Class was very good in my opinion, and I'm not sure I would change anything. However, I often wondered if the class might have been better if we did a bit of in-class programming.

4. I would recommend focusing all assignments solely on the material we covered in this class and the prerequisites. Another recommendation is in regards to grading on the exams. Since there are only a few problems on each exam that are worth multiple points, I think it is unfair to give zero points if the question is wrong due to a slight error made in one of the steps. Please consider giving partial credit as these problems require multiple steps, and a small mistake on one of the steps can cause us to lose up to an entire letter grade on the exam.

6. None. I really enjoyed this class structure. The website was perfectly organized. Thanks :)

7. None

8. No more textbook usage

9. I feel like the class participation essay is unnecessary. But overall it was a great class.

10. I wish we had more written assignments so that we had more practice for the exams. Maybe even remove the participation paper since that was kind of unnecessary in my opinion and replace it with some small homeworks (do not make them big as the assignments are already big enough). Also I wish the exams are more lenient with the partial credit as some questions earned zero credit just for one mistake. Also first assignment was graded very harshly despite it being the first assignment so maybe go a little lenient on that. Also extra credit opportunities would be nice so that people have a choice to improve their grade.

11. Panopto would be great for review since we do not have worksheets + solutions. The slides have some solutions to the sample problems but do not go in depth with the steps to get to the solution.

12. Put answers to example in class on the lecture slides

13. Perhaps make the homeworks a little less challenging or large. They were interesting and fun to do, but sometimes they were overwhelming and felt like big tasks to complete.

14. More looking at code

16. N/A, it's good as is

18. More time for assignment with dijstras. No group assignment.

19. I think for assignment 4 it would have been better for the group that worked on the design phase to work on the implementation stage together.

20. More leniency on midterm grading.

21. Small quizzes on the different concepts and algorithms.

22. Participation should not be worth 10% of grade. That is just F**K ridiculous, grade should focus on programming assignments and exams.

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

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

1. Attend class and do the class exercise. Ask for help when needed.

2. Be sure to periodically check your functions on linux

3. Come to class, bring a notebook and do your best to make sure you understand all the group-exercises and concepts mentioned in class.

4. Expect to put a lot of time into the programming assignments. The assignments have reasonable requirements, but they are not something you would want to do last minute. Also, attend class. Professor Pisan gives really good lectures and class exercises that are very beneficial.

5. Show up to class or you won't pass. Every class is filled with new information and missing a single class can result in you falling behind.

6. Start the assignments as early as possible, ask questions, and have fun with it. If you like challenges, you will love this class.

7. Attend lectures, start projects early, especially the first one where you have to learn and get comfortable using Linux

8. Start assignments early, they are time consuming.

9. Come to class and participate, and practice.

10. Do the assignments the moment you hear about them. Assignments take a lot of time to fix especially with a glitch that might take hours to fix.

11. Go to class. That is probably the best way to learn the material. I barely needed to study outside of class.

12. Read the book and write down examples from class neatly

13. Start the homework early and read the book. The book is very handy.

14. Just pay attention during class

15. Stay up on due dates and what topics are exams

16. Just make sure your understanding from CSS 342 is very solid, otherwise you will get lost very fast.

17. Don't use code until you understand how it works. This means spending more time on assignments.

18. Make sure to start dijstras early

19. Make sure to attend classes to understand what is expected to be on test and on the assignments.

20. Come to class everyday and patricipate in class activities.

21. Attend as many classes as possible and start assignments early so that you can submit them before the due date and receive auto feedback which you can use to modify your project and resubmit before the due date.

22. DO NOT TAKE HIM.

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.