Columbia University: School of Engineering Fall 2021

Course: CSORW4231_002_2021_3-ANALYSISOFALGORITHMSI: CSORW4231_002_2021_3 - ANALYSIS OF

ALGORITHMS I Instructor: Alexandr Andoni

1 - Course: Amount Learned									
Response Option	Weight	Frequency	Percentage	Percent Responses					Mean
Poor	(1)	2	4.26%						3.83
Fair	(2)	3	6.38%						•
Good	(3)	13	27.66%						
Very Good	(4)	12	25.53%						
Excellent	(5)	17	36.17%						
				0	25	50	75	100	Question
Response Rate	Mean	STD	Median						1
47/111 (42.34%)	3.83	1.13	4.00						

2 - Course: Appropriateness of Workload									
Response Option	Weight	Frequency	Percentage	Percent Responses				Mean	
Poor	(1)	6	12.77%						0.00
Fair	(2)	7	14.89%						3.30
Good	(3)	13	27.66%						
Very Good	(4)	9	19.15%						
Excellent	(5)	12	25.53%						
				0	25	50	75	100	Question
Response Rate	Mean	STD	Median						
47/111 (42.34%)	3.30	1.35	3.00						

3 - Course: Fairness of Grading Process									
Response Option	Weight	Frequency	Percentage	Percent Responses					Mean
Poor	(1)	2	4.26%						3.72
Fair	(2)	4	8.51%						-
Good	(3)	12	25.53%						
Very Good	(4)	16	34.04%						
Excellent	(5)	13	27.66%						
				0	25	50	75	100	Question
Response Rate	Mean	STD	Median						1
47/111 (42.34%)	3.72	1.10	4.00						

4 - Course: Overall Quality									
Response Option	Weight	Frequency	Percentage	Percent Responses					Mean
Poor	(1)	3	6.38%						3.77
Fair	(2)	2	4.26%						0
Good	(3)	12	25.53%						
Very Good	(4)	16	34.04%						
Excellent	(5)	14	29.79%						
			•	0	25	50	75	100	Question
Response Rate	Mean	STD	Median						
47/111 (42.34%)	3.77	1.13	4.00						

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5 - Enter any additional comments here

- In one assignment, we discuss the problem in groups and use the same methods. My teammate ended up 100 and I ended up 93.
- I believe that 25% of the grade being the midterm and 40% of the grade being the final is quite high, considering that the problem sets we were doing consistently were much more time consuming and reflective of our learning.
- - Relied heavily on the textbook, MIT lectures, Google and TA OH's to get through this class
- The delivery of the course material was very much like a Coursera course.
- Consistent with the abysmally poor teaching quality along with many of the instructors at Columbia University Computer Science department. There is a genuine lack of accountability in teaching quality. This department is fortunate that it is operating under an Ivy League brand name and in a degree-mill style in which majority of students are international students from China whose primary objective is to obtain a shiny degree with an Ivy League brand name.
- This course is a lot to grok. I suppose this is an issue with many "introductory" courses, but the breadth of material made it difficult for me to feel like I'd mastered any particular concept. I guess we will see how this plays out on the final.

As a side note, I felt that the course staff were fair (lenient) with grading for the midterm exam, but that the exam had too many problems to solve within the time limit unless you are a savant and can design algorithms on site in minutes flat. For comparison, lots of companies give interviews that require candidates to solve these types of algorithmic questions, and usually for problems of this caliber 30 - 45 minutes is allotted for each question. Maybe I am just dense, but the fire tower problem could have easily taken me an hour to figure out if it had been assigned as a homework question. Again, maybe I am dense, but there's at least one homework question that I thought about on and off for several DAYS before writing the correct solution. I think herein lies the main challenge for a course like this: it's difficult for the professor, who's taught this course many times an is an expert in the subject matter to intuitively understand for which questions students will be able to make the mental leap / have the "ah ha" moment during an exam and be able to apply the techniques they've learned. When it comes to algorithm problems, if something doesn't click you're just screwed.

If this isn't already happening, I'd suggest that the TA's solve the proposed exam questions in a timed setting to gauge their performance and eliminate questions that are too difficult. I suspect that even if the TA's took the midterm exam some would have issues solving all of the questions in the time allotted.

I don't suppose the exam format will change in future semesters based on this feedback, but given the number of topics covered in the class and the amount of time devoted to each one, it's hard not to walk into the exam with a bit of a defeatist mindset knowing that you'll have an hour and a half to tackle 6 difficult algorithms questions across several problem domains, at least one of which you've just covered in class mere days before.

- The material covered is great in this course, but there's unfortunately a lot of red flags. The midterm had two problems that were super difficult and weirdly worded which left me feeling like absolutely no one vetted the exam? Did no TAs try to solve the problems? And one of the problems pon the midterm didn't even have a reasonable solution!! What if we had spent most of the exam trying to figure out that problem?? Really crazy and not fair, imo. And then there's still no info about whether the grades would be curved... AND the instructor didn't give any acknowledgement that it was difficult, or poorly written, or had an unprovable (within the scope of the class) problem, but instead shared that someone got 100 on it... That was super discouraging and unhelpful to hear.

It also took a really long time to get grades back, which I get, the TAs are also busy, but we are trying to learn from our mistakes and it's very hard when we get the grades back weeks upon weeks later. Also some of the solutions are wrong (still, now, as of writing this). E.g. the lexicographic / radix sort problem.

The last two homeworks were totally brutal as well -- over thanksgiving break and still very challenging. And NOT "shorter"!! The write ups take hours upon hours, so having it be three problems but still 7 parts is not shorter than a 5 question homework. The last homework was particularly tricky, i think, as the material felt really rushed and is confusing from the book as well.

Also there were updates to questions happening on Ed that didn't appear in the questions -- re: certain graphs being directed, or needing an algorithm to be asymptotically "faster than the generic algorithm"... These are changes to the questions!! We need updated homework, or an announcement or something.

I'm sorry if this comes off as harsh, but I think this course has a lot of potentially just these homeworks and midterms were pretty brutal.

- Assignments were too difficult and hence workload was intense