



# Data Structures - Spring 2024, Lecture (SP24:CSCI-UA:102:1:011)- Alan Amin

Project Title: **Course Feedback Spring 2024**

Courses Audience: **33**

Responses Received: **23**

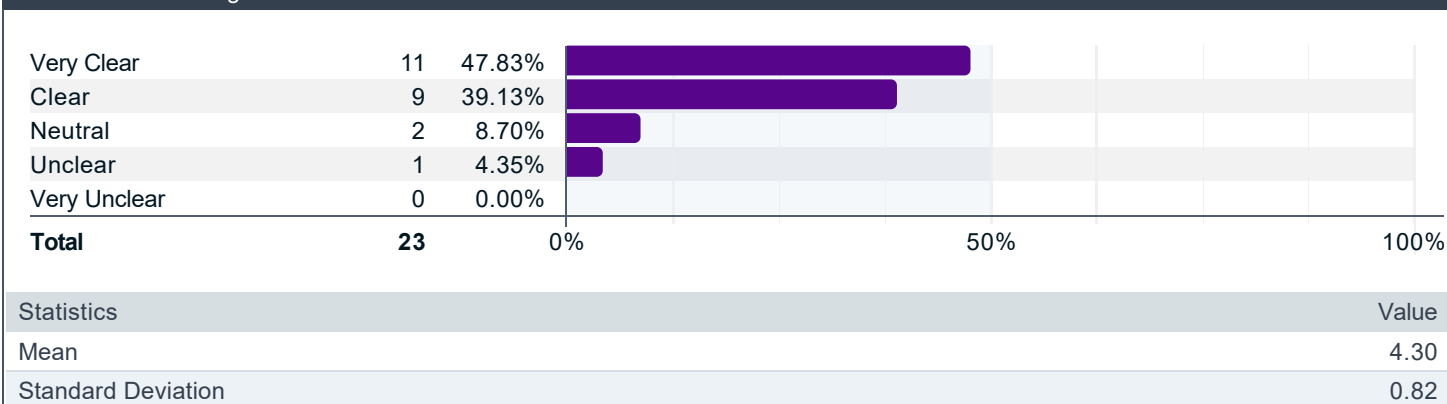
Response Ratio: **69.70%**

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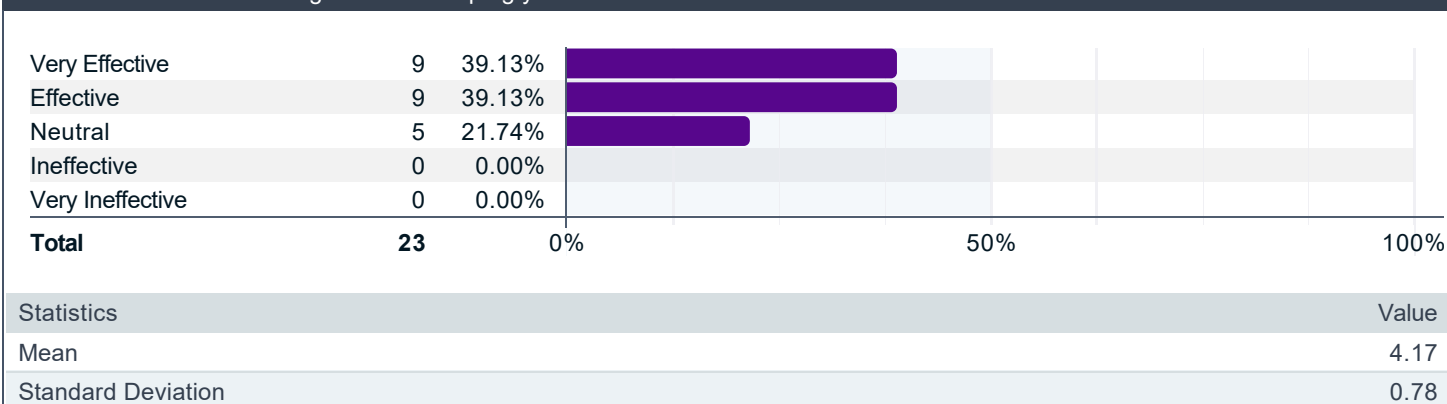
Creation Date: **Saturday, June 29, 2024**

## Questions about the Course

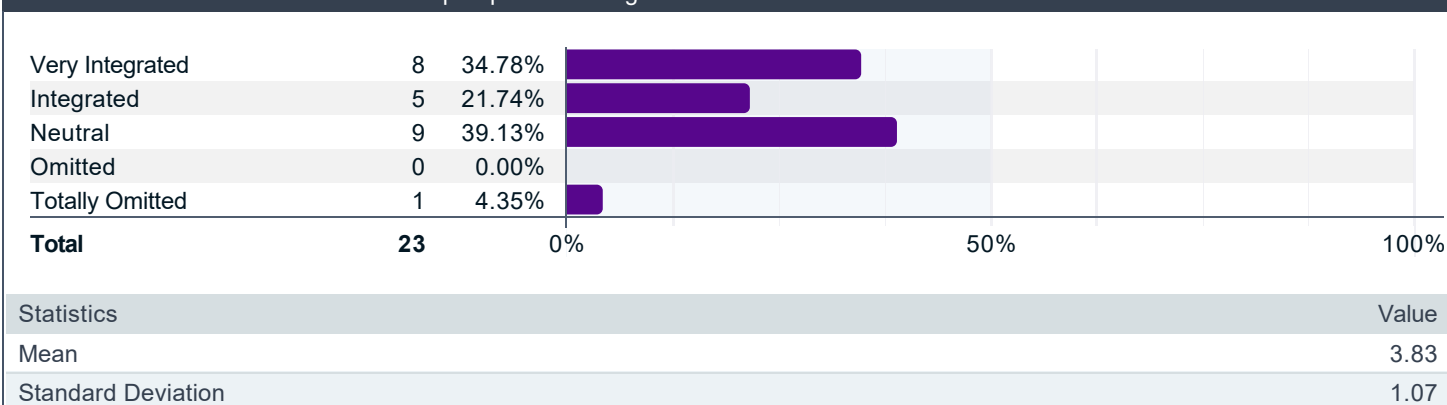
How clear were the goals of the course?



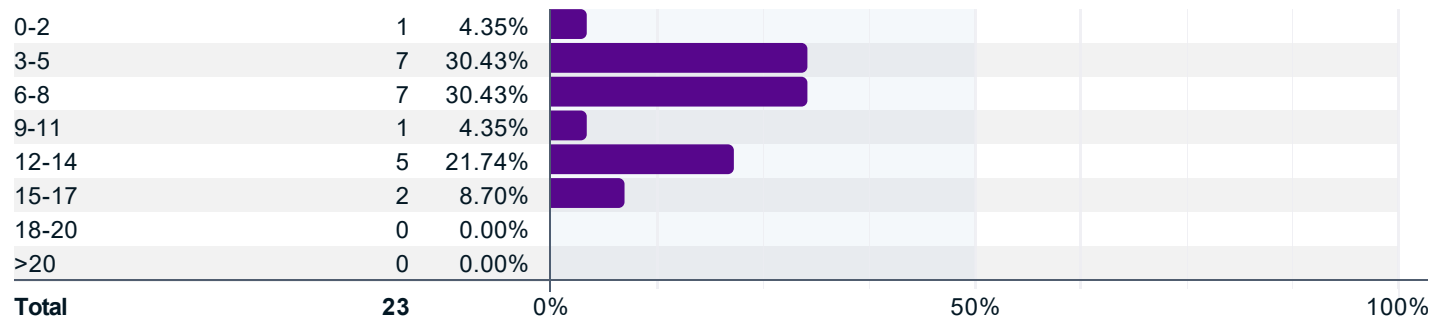
How effective were the assignments in helping you learn?



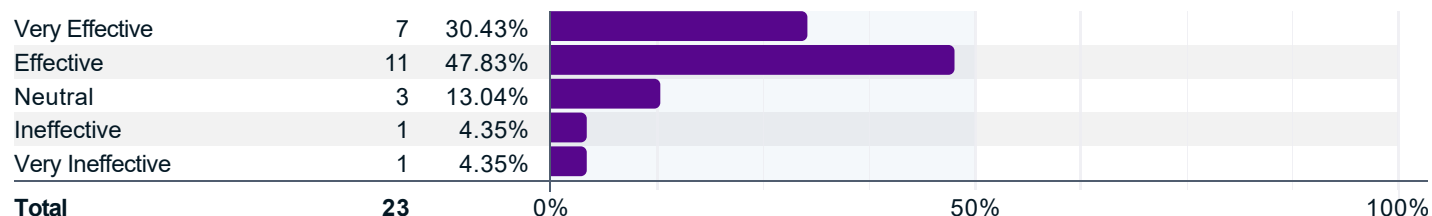
To what extent were diverse voices and perspectives integrated into this course?



On average, how many hours per week did you spend on course-related work outside of class?

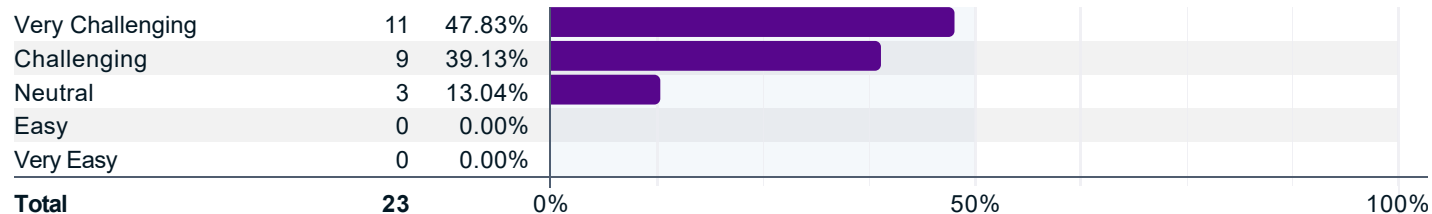


How effective was the course at helping you learn?

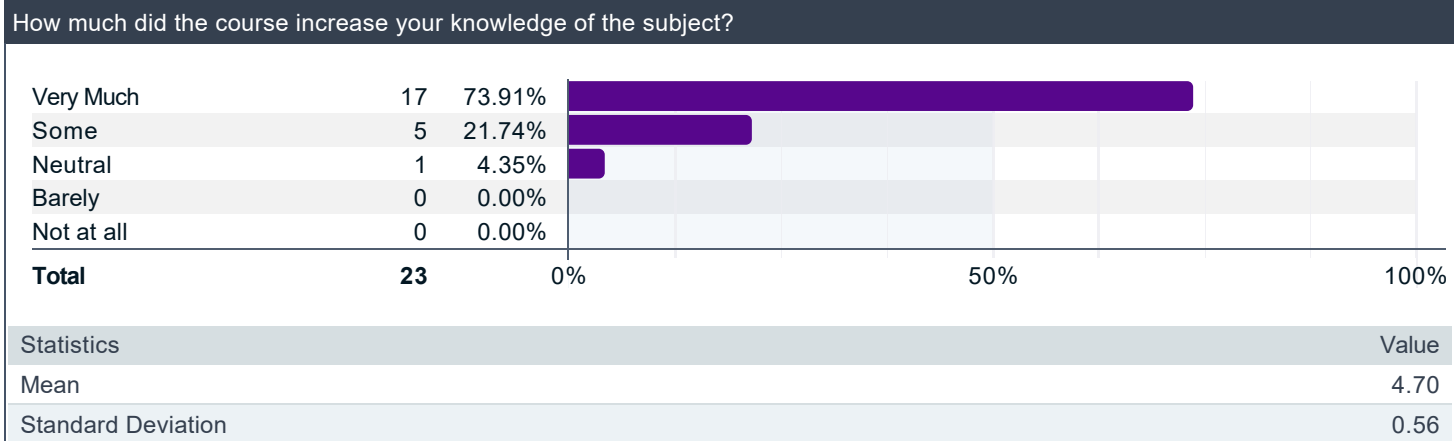


Statistics	Value
Mean	3.96
Standard Deviation	1.02

How challenging was the course?



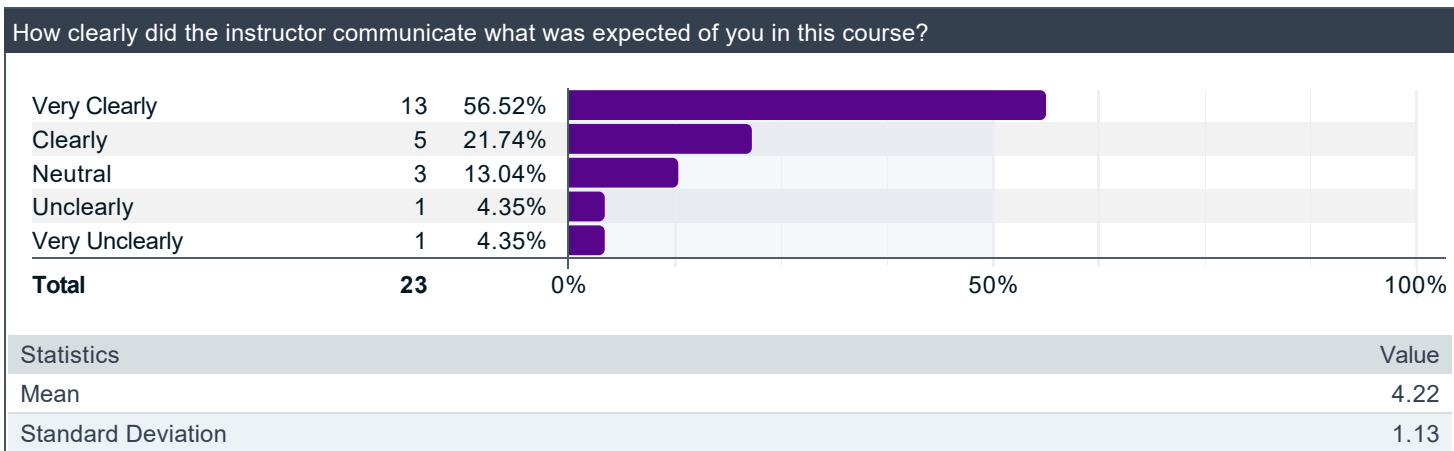
Statistics	Value
Mean	4.35
Standard Deviation	0.71



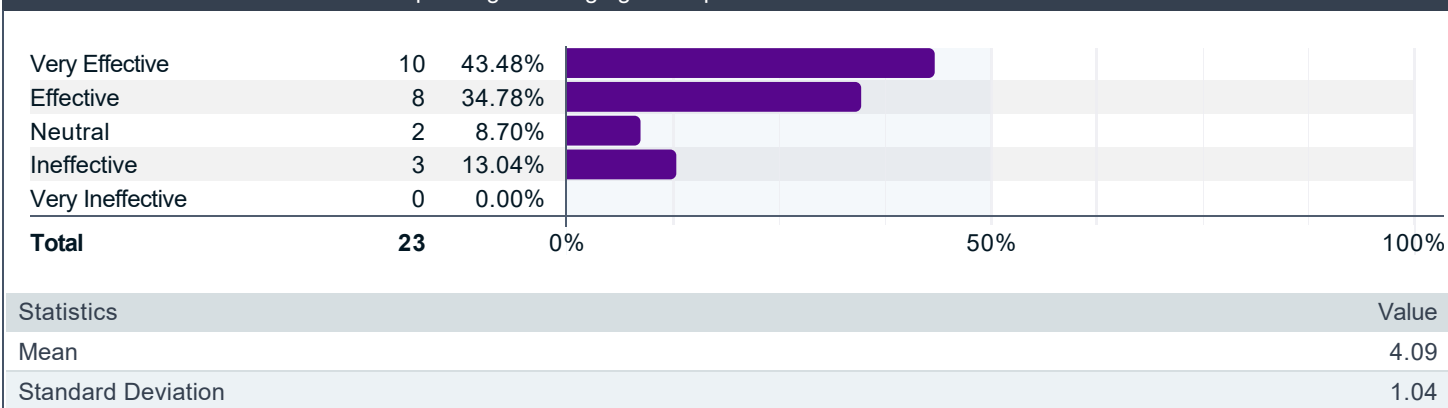
Is there anything else you would like to share about the COURSE?

Comments
Pretty good course the difficulties I had were just from the material.
We went way beyond what should've been taught in a data structures course. There were many concepts that we covered in this class that go WAY beyond data structures and broach into basic algorithms. We were taught concepts like graph theory, advanced algorithmic analysis, minimal spending trees, etc.
it was tough but fair
I'm a Tisch student so I was absolutely terrified taking this course, but it actually turned out fine, and I think the Alan and Charlie were definitely really helpful in this way.

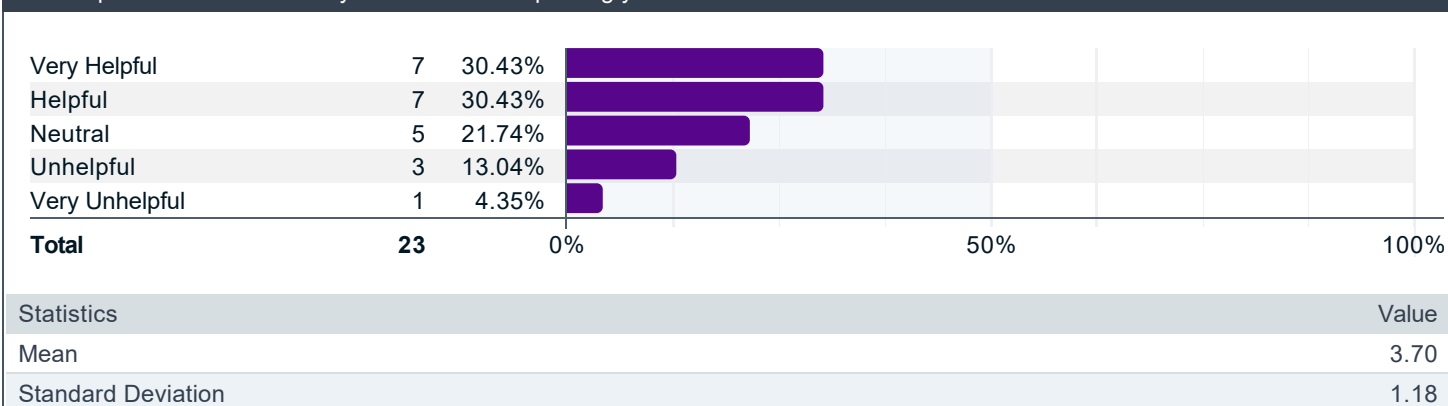
Questions about the Instructor



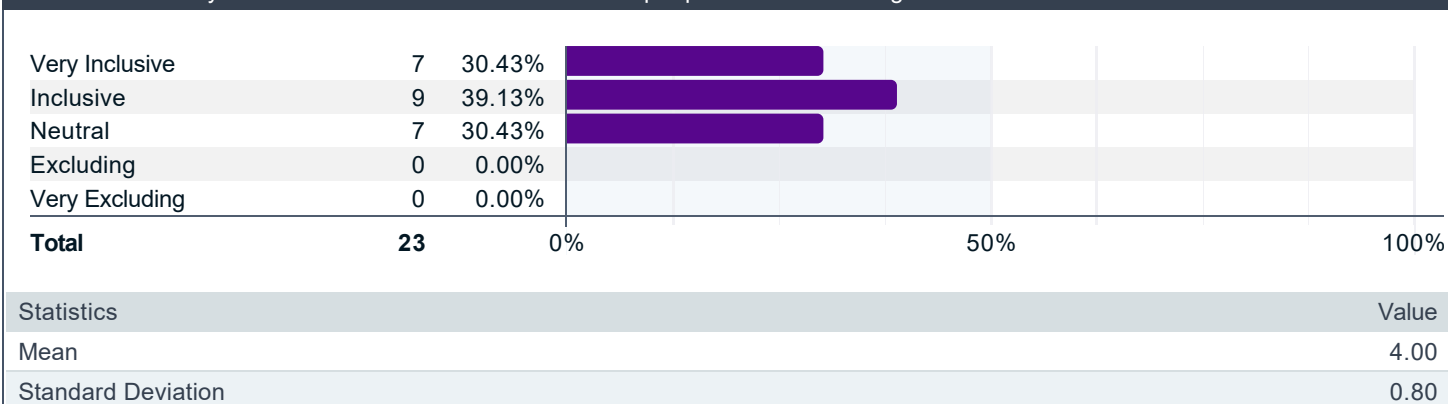
#### How effective was the instructor in explaining challenging concepts and/or methods?



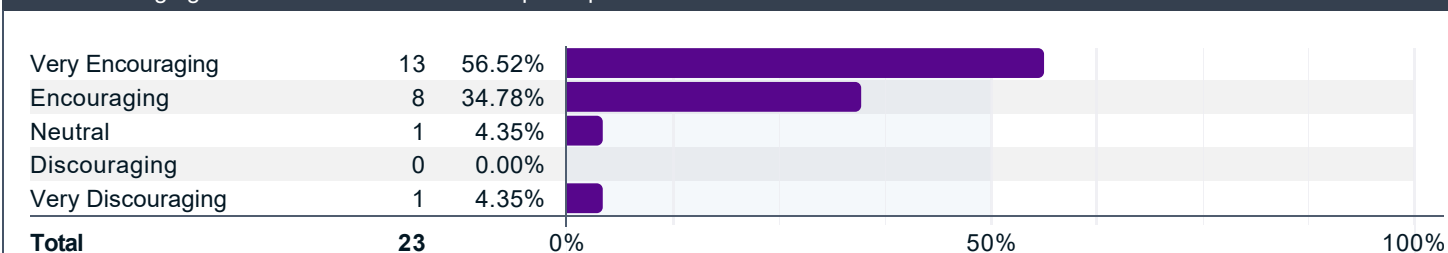
#### How helpful was the feedback you received in improving your work?



#### How inclusive did you find this class environment towards people of diverse backgrounds?

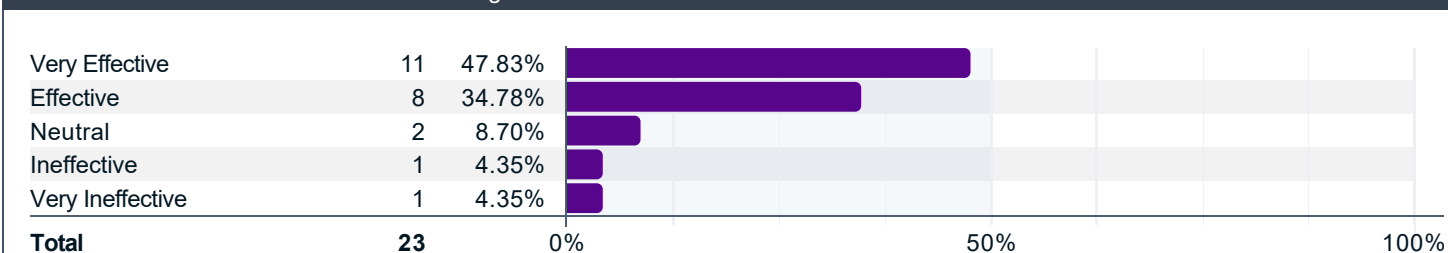


#### How encouraging was the instructor of student participation?



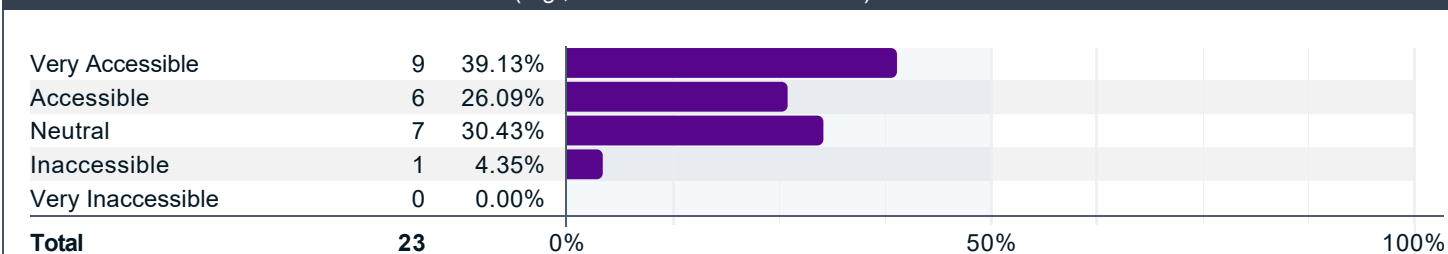
Statistics	Value
Mean	4.39
Standard Deviation	0.94

#### How effective was the instructor at facilitating class discussion?



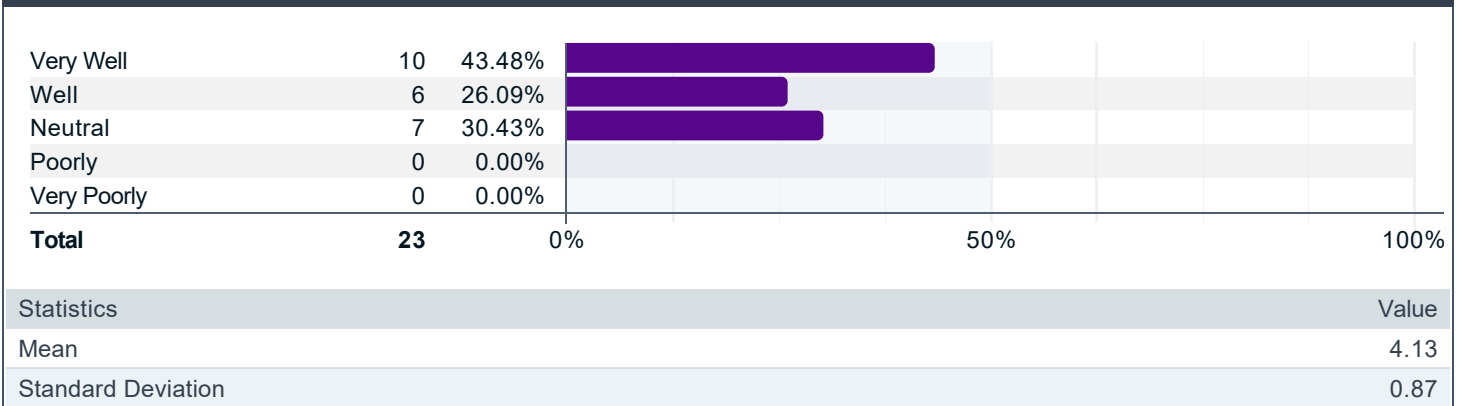
Statistics	Value
Mean	4.17
Standard Deviation	1.07

#### How accessible was the instructor to students (e.g., via e-mail and office hours)?



Statistics	Value
Mean	4.00
Standard Deviation	0.95

How well did the instructor create an environment that promoted the success of students with diverse backgrounds and experiences?



## Is there anything else you would like to share with the INSTRUCTOR?

Comments
It would help if there was a clearer outline of the concepts learned with each topic and class. For example when we're learning implementations of new data structures, it would be helpful if there was a slideshow explaining the overview of the data structure, in addition to the interactive implementation in class.
Really great prof!!!!
Personally, I was able to really keep up with Alan's lectures and felt myself learning a lot. The class was undoubtedly challenging, and when I compared our coursework to friends in other sections they were really confused. Ultimately, I think that the difficult nature of the class really helped me learn and grow as a coder far more than any other of my friends in "easier" sections. I've never felt stronger in my capability as a Java programmer. My areas of struggle can pretty much primarily be attributed to the disorganization of our recitation, which Alan wasn't responsible for. Outside of class, when I needed extra support, Alan was very accessible and kind when I was struggling :)
Great professor. Very engaging lectures and down to earth / accessible to students.
I'm very disappointed with the education I got this semester. There are a number of improvements that need to be implemented if you teach this course again. Firstly, you should have encouraged more student participation. When you are teaching a lecture, you should really be trying to facilitate students to get to the answers themselves. You did this for the first two lectures, and then grew impatient when you asked a question and students didn't answer. But the truth is, students were afraid to participate because they were afraid they would get the question wrong. When students raised their hands to answer a question and got it wrong, you made them feel judged. Instead of guiding the student (and therefore the rest of the class) to the correct answer, you laughed at the student, and then immediately gave us the answer. This leads me to my next point: the pacing of the class was way too fast. You threw way too much information on us, and didn't give us enough time to let the content be absorbed. It felt as if you were trying to get through a checklist, and once you said something there was no need to review. We went beyond the scope of the course, in my eyes, because we ran out of content to go over. What we should have done is spend more time on each concept, carefully ensuring that everyone understands. Slow down, be more patient, and facilitate learning among students instead of lecturing. To me, it felt like you rushed through these concepts because to you they felt basic; they felt like second nature. But we are undergraduates who are seeing these concepts for the very first time. Take the time to really explain the concepts. When the entire class is failing the quiz, it's not because we aren't trying hard enough and it's not because we're not good at computer science. It's because not enough opportunities were presented to us to learn the content. For this class, I would spend several hours each week trying to learn the content outside of class. (This isn't including the time I spent on the assignments, which was also way longer than it should've been.) While I understand that it's a given that students who don't understand something will need to put in extra work, I felt like I was *always* putting in extra work. By the time we got 75% done with the semester, I felt as if the best use of my time was to not come to class and teach the content to myself because the concepts that you were going over were beyond the scope of data structures. Finally, there should have been better communication between you and Charlie (the recitation instructor.) The recitations felt like they were an afterthought. Many times Charlie was desperately scrambling to figure out what we were going over in order to help because of how unconventional the curriculum of this course was. Alan, I have immense respect for the work that you do. When you tied some of the content in this course to your bio-informatics work, it seems like I was getting to see the real, passionate you, and it made learning fun. But most of the time, it felt like teaching was a chore for you, and unfortunately, this really came across in my experience this semester. I know this feedback is quite harsh, but I hope that it can give you some perspective so that students in the future can have a better experience than I did. Because I feel like you have the potential to be a great professor.
He's nice
Alan's a great professor and great person, and I kind of hard to believe that this was actually his first taught CS course ever.
Alan is an amazing professor. His lectures were very in depth and engaging, and the way he introduced concepts allowed students to try to first solve the problem, then he would guide us to the answer and help our understandings. Super nice, available outside lecture, smart, engaging.
I learned a lot, definitely more than CSCI-UA 101.

# CSCI102 Amin 2024 feedback

21 responses

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The assignments were meant to get you practicing implementing complex data structures. Did this occur? What advice do you have for improving the assignments in general? What advice do you have for improving particular assignments?

21 responses

Assignments are useful, but some of the instructions are not very clear

The assignments were very helpful in implementing the different data structures however, sometimes the assignments had typos that made it difficult to understand or complete and were fixed at the last minute. The assignment could have been worded better.

Yes the assignments got me to practicing implementing complex structures. To improve the assignments, they shouldn't be as intensive as they currently are.

This occurs. It's will be helpful if every assignment has some hints.

Other than the typos on the assignment briefs, I really appreciated the assignments because it effectively got me to apply what I learned in class. It was the best method for me to truly understand concepts, methods, algorithms, etc. That's why I think you should make them shorter and more frequent.

Yes

I think that the assignments were very in-depth but extremely intimidating when we've just gotten a handle on the data structure itself. The shorter assignments, like the priority queue/iterable interface and radix sort HW were much more accessible to me, which allowed me to have a better understanding of applying the code.

i would give extra practice problems for each topic covered. i feel like the homework didn't allow us to go over different types of implementations

Yes, I think it's important to keep track of what variable you are currently working on, its type



and its purpose.

I think the assignments were pretty good at implementing what we learned in class but it would be helpful to receive some kind of 'most efficient answer' after submissions are due just for people who lost points or wanted to see other variabilities.

Yes, the assignments were the thing that solidified my understanding of what I learned in lecture. I think making the assignments a little more detailed in the instructions/directions would be helpful. Sometimes the instructions were a little ambiguous IMO.

Yes! Although it took a few weeks to get adjusted to the format of the assignments, I ultimately did well on the assignments throughout the semester and mostly got 100% on them. I feel like most of my short-comings on the assignment were silly mistakes I made and not something that could be improved via the assignment instructions.

Yes, they were good and did occur. Maybe provide some suggestions before we start doing the assignment, which he did for once, so I think it is good.

Yeah, the assignments are super helpful! For some of the assignments, I had some trouble understanding the prompt because I felt like it's ambiguous, like for the traveling salesman problem, it says visit every node at most one time, and I was confused whether every node must be visited one time or can also not be visited at all. Anyways, I just guessed whenever I got confused, which was also mainly the reason I got points taken off, because I didn't understand the prompt correctly.

Some of the assignment are complicated to solve, I think those could be more straightforward.

I thought the assignments were generally good but i think that they were a little too loose direction wise so they were often pretty challenging

Yes, it did! Everything Alan taught is very clear, the code he provided in the class is very helpful.

Lowkey, some of the assignments were hard as-. Yes they helped me practice implementing complex data structures. I would recommend having assignments for a topic due before the quizzes on that topic because implementing the assignment is fantastic for studying and understanding the concept. Change nothing about the assignments - later students should feel the same pain.

Make the instructions a little more specific because sometimes they were too vague.

Yes, especially for the harder ones such as binary trees and recursive backtracking. Perhaps for the assignments, you could maybe have students complete real-worldish projects in which a certain data structure is required, so the use cases of where to use a certain data structure are understood

The assignments were useful. I feel like near the end of the semester the number of assignments increased without accounting for the difficulty meaning I couldn't spend as much time on each assignment as I would have liked. I would suggest balancing out the frequency of assignments and trying to ramp up the difficulty. TSP was also very difficult to understand in particular.

The homework problems in the textbook were meant to get you practice identifying how to use algorithms and data structures to solve complex problems. Did this occur? Did you do the homework? What advice do you have for improving homework problems?

19 responses

-

The textbook was very detailed and clear and helpful for preparing for the midterm.

I almost never did the homework. I only read through the textbook and did the assignments to prep for quizzes and exams.

Homework problems is perfect and enhance my understanding.

I didn't have a lot of time for this class this semester, so I didn't do any of the textbook problems. Even when things got rough after midterms, I didn't have time to dedicate to anything more than the main assignments. Another reason why I think they should be prioritized.

I think it might be better to include more topics taught in class in assignments, like specifically targeting, for example recursion, and gradually build up on that.

I some questions but I think that reading the textbook itself wasn't helpful for the questions in the book. Maybe mix in a few questions from class instead of making the homework entered on the textbook?

the conceptual problems helped but in terms of coding not so much. if you could make your own practice problems for us to attempt, i think that would help us understand your way of teaching and help better prepare us for future exams/quizzes.

Yes, I did the homework.

I think solutions for the homework would also be a bit helpful or a bit more direction in recitation in regards to which questions we might review in order to understand them better.

I didn't do many problems in the textbook. I only did some when studying for the exams.

When I was able to do the homework problems outside of class, they helped me better prepare for the quizzes and on-paper coding problems. My only advice for improving the homework problems would be giving more time in recitation to go over them.

Yes, it occurred. Yes, I did. Advice: understanding the thing in the lecture.

I did some homework problems at the beginning of the semester, but it was just too much, and I couldn't keep up, so later on in the semester, I just gave up, but they were definitely helpful since I understood lists and trees much better than I understood graphs. I wish fewer were selected because it was just a lot.

I only did a few homework problems from the textbook before the exams because I don't have that much time. Those are good.

Yes, it did occur! I did my homework, maybe it is better to give more details about homework requirements, sometimes it is little confused.

I did zero homework problems. You would probably have to collect and grade the homework to incentivize students to do it. My studying was mostly reading through the textbook and recreating the code

The homework problems were good.

Yes, but I found that some of the problems in the textbook were a bit too complex and veered off a tangent at times - still doable though.

The quizzes were to help you assess your own progress and to communicate the expectations for the class. Were expectations clear? Did the quizzes help you determine how well you understood the material? What advice do you have for improving the quizzes?

21 responses

quizzes help me keep track of my progress

Yes, the quizzes were helpful.

The quizzes helped me understand the material further and also told me if I needed to study more or not. To improve the quizzes, they shouldn't be worth 30% of our grade, but rather 20% or 15%.

The quiz did help me, especially the tree part.

My problem with the quizzes is how many of them there were. You were testing us on our knowledge more often than you were making us apply it, and even when the quizzes and assignments were on the same material, you were testing us on the concepts before the assignment was due. So, I felt unprepared to write any code for any of the concepts, even when I thought I understood it pretty well.

Yes the quiz is a helpful material

I think it's very difficult to absorb the entire question in the time given to us for the quizzes. This especially applies to the quizzes that were coding-based, and the implementation required a specific time complexity. The AVL Tree and traversal quizzes were much more manageable, so more of those quiz types should be mixed in. Overall, the expectations were clear.

maybe 2-3 quizzes are okay and helped me better understand the material. the rest were very difficult and i did not feel prepared for them. i felt like the level of difficult for the quizzes were the same for homework. also maybe not having quizzes every week would be nice or if there are quizzes every week, make them slightly easier because they shouldn't be as difficult as the homework.

Yes, the quiz did help me think about the issue more thoroughly.

I think the quiz expectations were clear and wouldn't really specify anything to improve them

Expectations were very clear, and helped me gauge how well I knew a subject and how well I can actually implement a concept/ data structure.

Once I got a hang of the format of the quizzes, I started doing better. Based on the lectures, I was prepared for the quizzes. But often we'd get lectured on something during our recitation that was barely related to our quizzes and many of my peers would get confused (myself included). I started doing better on my coding quizzes when I started to tune our recitation leader out and do the homework/textbook questions by myself. I think to improve the quizzes, I would just want better cohesion between lecture and recitation.

Yes, expectations were clear. However, I was still confused about the content in the quiz after taking it, since we didn't get clear explanation or answer after the quiz. Yes, quizzes help you determine how well I understood the material. I don't know, I feel like for the quiz I don't have idea for some of them, because I don't know when I should directly use the method or implement it with more detail and complicated ways.

Quizzes were super help. I would not have kept up if it wasn't for the quizzes. I think they're perfect.

Yes, quizzes are clear and helpful to understand the materials. They are similar to the exams so helped me a lot to prepare.

The recitation did not really do a good job preparing/reviewing us for the quiz

Yes, it is very clear! It helps me a lot to understand and know more about the extent of my understanding. but sometimes I can't finish it in 20 minutes.

The expectations for quizzes were clear. They were good. I like the fact that you allow us to make-up quizzes at the end of the semester.

Tell us the topic so we know what to study. i liked the quizzes where there was less implementation and more conceptual based

Yes, the quizzes were good, especially seeing that they forced you to learn and understand the week's material in order to do well.

The quizzes felt more like a test of whether I could get the hand coding done in \*TIME\* rather than my true understanding of the material. I.e. even if I knew the answer to a particular problem, I might not be able to come to that solution within the harsh time limits of the quizzes. This may have been because of how Charlie (not to throw him under the bus) planned

out the recitations, but I felt as though I never had enough time to really show my understanding on the quizzes.

I would suggest maybe incorporating more multi choice questions to test our understanding of core concepts and then saving the testing of implementation for the assignments.

The recitations were meant to help you practice class concepts with your peers and a tutor. Ideally, you would have spent this support to practice challenging problems in the textbook or implementing challenging code. Did this occur? Was recitation time used effectively? What else could we do in recitation? Another use of recitation could have been introducing more ancillary material or doing coding labs. Would this have been helpful? What other advice do you have for recitation?

21 responses

All good

The recitation was great as well.

The recitations were very helpful since it helped me further comprehend the content we learned throughout the week.

The recitation is also helpful.

We did do challenging problems during recitation, and Charlie did answer some of the questions we had. But I gotta be honest, the real reason why those recitations were basically useless to me is because Charlie doesn't explain things well at all. I hate to be that critical, but it's the truth. I only learned things in this class during lectures and when I was doing assignments.

I think coding labs might be helpful and also review the materials taught in that week

No, recitation should be for reviewing the previously learned material in class, and we mostly did that in recitation, which was helpful. However, more time should be spent introducing the weekly assignments.

recitation was not helpful. it seems like what was expected between the TA and professor were completely opposite. the concepts that were gone over in lecture should've been reviewed much better in recitation. especially the code and the TA couldn't even code :/

The material taught during recitation were sometimes different from those during class, which causes frequent confusion.

I feel like recitation was one of the more challenging parts of this class because it felt like we would be going over stuff that either wasn't related to the quiz or was kind of a tangent on one specific thing rather than a general overview of what we went over that week

This did occur. The time was always used effectively. Personally, I think that the way recitations were held this semester is perfect. I think what we did is more helpful than coding labs would be.

My biggest gripe with this course was the recitation. It was fairly unorganized and I can think of multiple occasions where our recitation leader lectured on something not brought up in the main class lecture instead of walking us through textbook problems or code. More coding practice in recitation would be very very useful because outside of the assignments I really wasn't getting any practice. I think if there had been more communication between the lecture and recitation, I would have done way better in the course because it often felt disjointed. For example, before quizzes, we would get lectured on something else and be very confused once we were actually taking the quizzes on subjects brought up in the lecture.

Yes. However, I think recitation is not very efficiently. We could do more demonstration of code on the board, just go over the logic. I feel like it would be better if keeping on going with the lecture.

I feel like the recitation was too short to do so much. We never really finished the practice problems or talked about challenging codes. I think just a brief review of the week and the quiz is the most we could get done.

The recitation is helpful overall, but it sometimes focus on space complexity which is not that relevant to the lectures, I think this can be substituted by understanding the code and concept from the lectures.

The recitation stuff some of it seemed irrelevant to the quiz/weekly lesson

Yes, it did occur! It is time used effectively! Doing coding labs really helps me a lot, it can makes me more familiar with those methods

We spent most recitations implementing code, reviewing past quizzes, doing the weekly quiz, and reviewing certain concepts. I thought Charlie was a good recitation leader - relatively engaging and knowledgeable about the material. I like that we reviewed the material before taking the quiz. Nothing I would change.

The recitations were good in reviewing material and answering questions for the quizzes.

I love Charlie

Recitation time was not used effectively because (in my opinion) there was a disconnect between Charlie and you. I.e. sometimes Charlie would talk about a concept and the way he explained it wouldn't be the same as you had explained it in class. Or Charlie would ask us about whether you had explained a concept and you had not, or the other way around where you would ask us whether Charlie had gone over particular problems in recitation and he had not, which would use up class time.

I think setting out exact expectations for particular classes/recitations would be very useful. Something else that might be useful would be for lectures to go over concepts and then establish a list of problems that Charlie would explain and solve during recitation.

The lectures were meant to introduce you to the main ideas of the class. To get you primed for the day's material, we started each class with review. Were these helpful?

I tried to introduce algorithms and data structures by using questions to guide the class to come up with them themselves. Was this effective?

To mimic how one might implement a data structure at home, I coded all material together with the class. Was this helpful in showing you how to code up these structures?

To have a more interactive lecture, I tried to avoid using slides or showing you completed code. Was this a good choice?

What other advice do you have for lectures?

20 responses

love the explanation in cartoon

Yes, the lack of slides and interactive coding was the right choice. However, it would have been better if there class notes in case we miss class. Also it would be really helpful if the class material was better organized, i.e a clear list of all the topics that will be covered, the number of quizzes and assignments that will be dropped, the dates of exams, the topics of quizzes,

were informed at the beginning of the course. Irrespective of that, Professor Amin is an amazing professor, and the class is one of the best CS courses I have taken at NYU.

The lectures were very helpful since the code and practice problems helped me realize how to apply these algorithms into my own coding practices.

All perfect

The reviews were useful. Guiding the class to come up with algorithms was also useful because it got me to really think about what a real implementation would look like. Coding in class and walking us through it was very helpful because it formed the basis of my thought processes when it came time to implement those algorithms for the assignments. And for the last question, I think the amount of interactivity in the class is really great, but I think also having slides just to show the concepts and terms visually would help make things more clear. Maybe you could show a slide that briefly talks about linked lists and its methods, and then switch over to eclipse to walk through the implementations of those methods in detail.

The review questions was helpful, and so was the interactive coding. I understood better when the chalkboard was utilized to show diagrams of the code's functionality. I consistently struggled with timed-coding, so more practice on implementing smaller methods would be helpful. I also think more time is needed going over time complexity and each data structure.

the lectures were good and they got better throughout the semester. slides really help with introducing new concepts because we would've been able to look back on them and use it to study. coding together also helped but i think slides and coding are necessary.

N/A, generally a good class

I thought the fact that you guided us through coming up with our algorithms ourselves was helpful but think that having slides with a few notes might be helpful in addition to the progression between the code. I think switching between those different formats may also be helpful for keeping the lecture engaging.

Review was super helpful. The questions to guide the class were incredibly thought-provoking and insightful. They did an amazing job of facilitating discussion and understanding/learning. Yes, leading us through the code and the actual coding while talking through the reasons why was super helpful. Yes, I think I would much rather prefer this format of lecture than slideshows. I don't really have any ideas on how to improve this class and how it was taught, I think it was perfect.

This was very helpful in understanding how these algorithms and data structures worked. I

rarely felt lost in the lectures and found your explanations, examples, and visualizations of data structures on the board very helpful and paramount to my areas of success in the class. I also really liked not seeing slides of completed code so that I was able to actually think about the problems we needed to solve before knowing the answer. I only wish there was a review lecture before the midterm and final exams.

Yes, they were helpful. I really think it is a good idea. Yes, it was effective. It helps me to follow the logic and know why we need to do it. Yes, it is very helpful in showing me how to code up these structures. Yes, I think it is a good choice to avoid using slides or showing me completed code. Personally speaking, I like this teaching style because it showed me how to implement code when we are writing code by ourselves, and it also helped me to follow the logic of the code.

The lectures were helpful. I feel like I kept up better when eclipse was opened and we were following the code. When it's just the blackboard, I got lost a lot. I feel like if there were more comments in the code explaining it, it would be easier to review after class. I feel like sometimes when I go home and look at the code, I get confused half way, like what is this line doing or what is this loop for.

The answers for all questions above are yes.

I liked the way you taught the class and felt I learned a lot. I like how you live coded and broke down the code along the way. Maybe just more application examples + walk throughs.

I think it is helpful in showing how to code up these structures, but I can not remember all details if without using slides, and sometimes I can not fully follow coding part in the class, it is better to teach slowly.

The teaching methods in this class were fantastic. Coding out the material and walking through how each structure works was a great way of teaching. It was a good choice to avoid using slides and complete code - nobody learns from that shit. Make more clear the importance of various concepts throughout the class (what is must-know, what is should-know, what is tangential?), expectations for assignments (maybe you mentioned this at the beginning, but making known that we're grading 8/11 and 6/8 assignments).

maybe some slides would have been helpful but definitely drawing on the chalkboard was helpful, and yes not showing completed code was good for learning and thinking

Coding it up in class was definitely helpful to learn. Maybe somehow integrating slides as well into classes could help students rehash concepts when reviewing the materials after class (seeing that recordings aren't available)

The lectures were engaging and some of the best I've had so far.

The questions were effective at introducing material, but some of them felt disconnected in the sense that without context I might not know how to utilize them. It might be useful to introduce situations where you would need to utilize particular data structures or whatnot in the real world.

Coding was helpful, but it would be even better if you could spend a bit more time on the \*why\* rather than the \*how\*. Explain why you're using certain methods, the thought process behind the implementation, etc. rather than just going over it.

Slides and/or notes would definitely help, at least for revising material. Missing a lecture or two made me feel incredibly behind, particularly because there were no slides I could refer to even just to get an idea of what content I had missed and what I needed to ask questions about. I.e. I didn't know what I didn't know; having slides would have helped me figure that out so I could better approach learning missed material.

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