

Algorithms (Full Summer 2024)

Instructor: **Pavlu, Virgil**
Subject: **CS**
Catalog & Section: **5800 04**
Course ID: **52846**
Objectives:

Enrollment: **33**
Responses Incl Declines: **15**
Declines: **0**

Instructor Related Questions: Virgil Pavlu (29 comments)

Q: What were the strengths of this course and/or this instructor?

- The professor clearly communicated complex topics in a simple manner. Even topics that seemed challenging were easy to grasp and any doubts and questions were addressed quickly. The course is also well structured and follows the CLRS textbook closely.
- The strength of the course is it has been designed in a way which force you to learn a lot, teaches you lot things.
It is definitely not a beginner friendly course to be into, as It runs with lot pace and you need to catch up with it becomes very impossible at times.
But on the positive end, it does forces you to learn a lot, I can't imagine what all different topics i have learnt from my end by reading books, or be it using youtube studies etc etc, which helped personally a lot.

But having said that I expected lot to learn in class personally that was not a case for me in this semester unfortunately, as I didn't had prior knowledge on these topics so it became really difficult for me. But I tried my 110% to give on learning things.
- I have never met a more enthusiastic and driven professor.
I truly commend professor Pavlu for coming to lecture and office hours with the sole goal of teaching his students as much as possible. This is a professor that cares about his students and wants to set us up for interview success.
- The textbook and the material taught are pragmatically useful, no time is wasted.
- He is very knowledgeable. He knows the content.
- Very smart professor, using great examples to explain some data structures and algorithms. You will go through a lot more advanced data structures and algorithm topics. Professor will also ask in class to see if everybody can follow what he lectured and will answer questions asked by students. Very accommodating if you need a little bit more time to work on homework with no late penalty because homework are very challenging if you don't have a solid foundation of algorithms.
- Very Enthusiastic and helps students think. Office hours are very helpful and fun.
- Contents are challenging, but Professor is always helpful and come to office hour almost every time.
- you can tell when a course is taught by a professor that is an expert in their field. you can trust that virgil knows what he's talking about and is passionate and excited about the field
- Everything. One of the best lecturers I've had so far in academy. The pace was perfect and I learn a lot even from the basic topics I thought I knew. He explains the concepts very intuitively and the class was very interactive or thought provoking. The assistance during office hours was great, the online material was greatly organized as well. I can't find any flaw aside from a particular topic taught.

The exams are definitely hard, they require creativity from the techniques you've learned, and not just memorization. But the TA and the professor score exams very generously, so I don't see this as a problem.
- They helped challenge myself at every step such as in assignment and exams

Q: What could the instructor do to make this course better?

- I would like if the course included a little bit more programming. Though we understand topics like Greedy and DP, it's still kind of tricky to apply these concepts in Leetcode-style programming questions. So a little help in this matter would be good.
- I would strongly advise to increase the hours, make it a 4 day or at-least 3 day course where the hours are divided equally and make use of the extra added day as in a way to let this course go with normal pace.

I have heard from the students who had prior experience learning this subject in their undergrad also say that, there are sometimes where the topics are so much with the pace that things go above their head.

I totally understand the difficulties with the midterm and the strategy of giving hard time solving and thinking which helped a lot, which is one of the positive side of this course for me.

But having said that, there should be enough time for student to digest things. I knew on before hand its going to be tough, that's the reason I only had only subject this semester, still I faced lot difficulties and mostly I have learned lot from self studies from internet.

So, having an extra day in the week, should make the course run on a normal pace, so professor also can go in depth a little bit and also touch upon some basic topics which could help students to connect all the dots.
- I think the amount of homework content was daunting. I understand that this is hard to balance, but I felt that I leaned more on the weeks that the homework was easier, because rather than stressfully rushing to finish the assignment, and resorting to google and haphazardly crafting my assignment answers, when the workload for the week was manageable, I would actually take my time and understand the content from a more foundational level.

When the homework work load felt too massive and was daunting, I would stressfully rush to finish as much as I could ad quickly as possible, tackling each assignment problem one by one. This was rarely effective.
- A few practice questions before the midterm and final would've made a huge difference in my ability to prepare. Making sure homeworks don't need to be updated after they are posted would be ideal as well.
- Make class more interactive. Open it up for questions more often after introducing a topic.
- While you probably could request office hours or sessions individually, I really hope Professor himself can also hold some remote office hours.

There are a lot of topics to cover in a semester, so Professor assumes you have a solid foundation in "undergrad" level algorithms and data structures. As a result, if you are from ALIGN program, make sure you practice your CS 5008 data structures and algorithm problems more. Otherwise, you probably will put more hours than what syllabus suggested. Professor said there was a student who was putting 50 hour per week for this course in the past.

While you can learn a lot from this course, but be prepared to put more hours than normal course workload if you don't have a solid foundation.

Q: What could the instructor do to make this course better?

- 7

Improve the grading system, or make students aware on what will they be graded.

If two students have a half baked approach similar to the actual solution. Now the first student is able understand the solution is wrong and writes a simple solution but is always correct. The second student does not understand the fault in the half baked approach and writes it anyway. In this case the first student is penalized for understanding the approach better and avoiding it. I think the grading system needs to have a decent revamp
- 8

Give clearer objectives before dive into the contents directly.

Show more examples when explaining difficult materials.
- 9

update the online syllabus ahead of time, triple check solutions to exam questions to avoid "harder than expected" exams

make it easier for people to know their grade during the course
- 10

All lectures from professor Virgil were very easy to understand and insightful. The only lecture I feel the quality wasn't as good was the lecture about Red Black Trees. For that lecture I think presenting the intuition of the insertion / removal process, rather than just write down on board the pseudocode for each case (why do these cases even appear wasn't clear to me until I read the book), would be much better. I think using the power point would be better than blackboard, because it takes too long to draw the tree and copying all these cases don't feel productive. Although I do understand this topic is pretty hard to explain.
- 11

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Q: Please expand on the instructor's strengths and/or areas for improvement in facilitating inclusive learning.

- 1

Nothing. The class sessions were all inclusive and I really enjoyed learning under the professor. Thank you!
- 2

There is no doubt about it, the professor is incredibly knowledgeable about the subject and things which he knows helps student in lot ways.

I would suggest to change few things in terms of my experience.

Usage of some digital medium to write sometimes the understand of of things written on board are not very clear. so using some digital medium to write upon so everyone could see clearly and then sharing those notes makes things better to recall to students regarding some topics.

Secondly I would suggest, that not all student have gone thought the undergrad level of study in this subject so there were many a times in the class where prof. use to leave some topics based on its a undergrad level prob. which will be not to hard. but still i found myself difficult understand also many of student who has taken this subject in undergrad level did also found things difficult as not always everything is been taught in undergrad level.
- 3

I think that the professor could explain things a little clearer. A mark of a good teacher is that when someone does not understand something, the teacher is able to reword and restructure their response. Unfortunately, professor Pavlu often had a single way of explaining things. When he was met with confused looks, he would simply repeat himself, rather than rephrase his response in a different way. Revising the response, or backtracking to more foundational topics wild eve for the professor when his students look confused.

I also don't understand his "who's with me raise your hands" method. Everyone is raising their hands. This is not effective and you're not actually gauging who is with you.

I also feel a lot of time was wasted exploring accessory content or more advanced content. And I appreciate the sentiment, the professor is trying to prepare us as much as possible for interviews by exposing us to all levels of problem solving. But it is frustrating when we absolutely rush through easier content and then spend a lecture or two on say, extremely avdanced "fun 2 star" DP problems. I wield just be lost and regret showing up to class that day. Slow down the pace of lectures and the overall course schedule. I appreciate learning extr content, but would appreciating just going over the required content more slowly.

I think there should be more emphasis on how to study and accomplish the homework. Pavlu liked to insist we "bang our head against a wall" for hours to do a homework problem rather than look up the solution. I think there is something to be said about everyone studyiny different, and sometimes there is a lot of value in doing an easier problem or looing at a foundational solution to then help inspire you on how to approach A much harder problem.

I wish the homeworks had an abundance of more easy problems for this reason. Force us to do some easier problems so there is a natural progression to the harder problems. If I don't know how to even begin the first exercise in the homework, that is an issue.

Lastly, I don't particularly understand how an 8 hour midterm adequately judged my performance in the class, if almost everyone does ather poorly and gets around the same poor score. I'd like a more manageable exam that had a greater standard deviation and actually judged me and gives me adequate feedback on my performance.

The lack of solutions is extremely frustrating. How can I learn from the homeworks without solution s (I had to use the internet a lot. Google is the only reason I did adequately wel here. The professor himself would say often he disliked the textbook. Lectures were really outstanding at times, but then I'd go home and be lost.
- 4

Refrain from using the word easy. A lot of times we would cover stuff that he would refer to as "easy" or "simple" and it made me feel nervous to approach him or ask questions. Could just be me though.
- 5

Already said in strength part.
- 6

Professor is good at breaking complex materials into logical steps and giving different perspectives on how to understand a topic using questions.

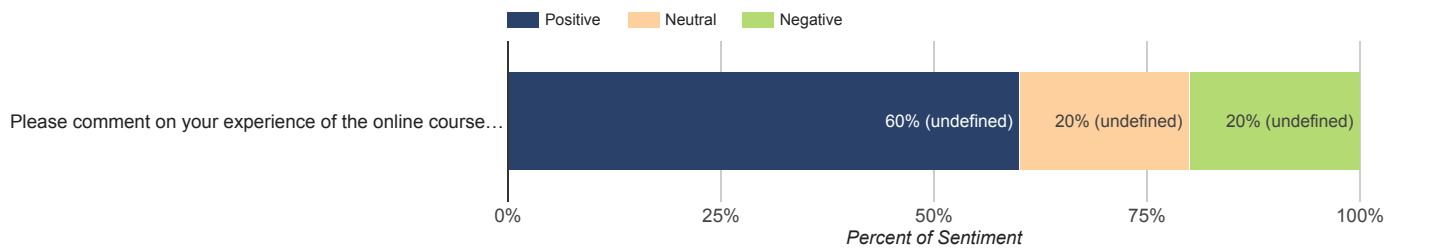
Hope to have more feedback on homework.

It is sometimes hard to follow during class because not sure what the question is actually asking. I think it is easier to follow if we understand why before understanding how.
- 7

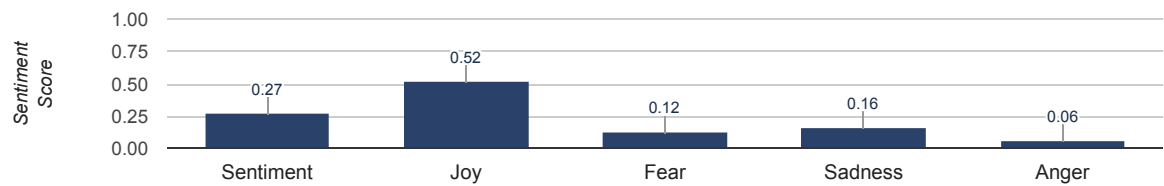
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Questions to Assess Students' Online Experience (5 comments)

Q: Please comment on your experience of the online course environment in the open-ended text box.



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- 1 N/A. This is an in-person class. ★★☆☆☆
- 2 Slides and notes were not great. They were extremely tough to digest at times.

One time at office hours the professor was trying to catch me up on a lecture I missed and we opened the slides together. Even the professor had a tough time parsing the notes. I think that speaks for itself. The notes and slides should be revised to be more readable, concise, and aligned with class content.

The YouTube videos were great. ★★★★★
- 3 It was organized well. I liked the schedule page. ★★★★★
- 4 not an online section ★☆☆☆☆
- 5 It was good ★★★★★

Student Self-Assessment of their Effort to Achieve Course Outcomes (8 comments)

Q: What I could have done to make this course better for myself.

- 1 I don't think there was any pre-work required for this course. The professor covers all topics in detail so everything was easy to understand and I could follow well with the course schedule.
- 2 I should have already known a lot of the things on beforehand, as this course only teaches the advanced version of the topics which you already know about in the DSA domain.

Which I did not have, prior to joining this course as I had no bachelor's degree in the CS domain. So it was a difficult course for me to match with the pace of the professor and the topics which were being taught on a high level, where I didn't have any basic background on it.
- 3 I'm not sure. I put a lot of work into succeeding in this class. I guess I should have communicated my concerns and vocalized questions more.
- 4 Prepping more for the lectures would have helped.
- 5 need to practice more to build more foundations to be better prepared for this course.
- 6 Write answers according to what is expected by the professor, as he expects them in a specific way.
- 7 Spend more time on the materials after class before rushing into homework first.
- 8 Taken basic programming classes beforehand