

Algorithms Data (Fall 2019 202010)

Instructor: **Young, Neal**
 Subject: **CS**
 Catalog & Section: **3000 01**
 Course ID: **16087**
 Objectives:

Enrollment: **83**
 Responses Incl Declines: **28**
 Declines: **1**

Course Related Questions

| Question | Number of Responses | Response Rate | Course Mean | Dept. Mean | Univ. Mean | Course Median | Dept. Median | Univ. Median |
|--|---------------------|---------------|-------------|------------|------------|---------------|--------------|--------------|
| The syllabus helped me to learn. | 27 | 32% | 4.1 | 4.0 | 4.1 | 4.5 | 4.0 | 4.0 |
| The textbook(s) helped me to learn. | 27 | 32% | 3.8 | 3.8 | 3.8 | 4.0 | 4.0 | 4.0 |
| The materials posted online, including Blackboard, helped me to learn. | 27 | 32% | 4.4 | 4.1 | 4.3 | 5.0 | 4.0 | 4.0 |
| The out-of-class assignments and fieldwork helped me to learn. | 27 | 32% | 4.7 | 4.3 | 4.2 | 5.0 | 5.0 | 4.0 |
| The lectures helped me to learn. | 27 | 32% | 4.2 | 4.0 | 4.2 | 5.0 | 4.0 | 4.0 |
| The in-class discussions and activities helped me to learn. | 27 | 32% | 4.1 | 4.0 | 4.2 | 4.0 | 4.0 | 4.0 |
| The classroom technology helped me to learn. | 27 | 32% | 4.4 | 4.0 | 4.1 | 4.5 | 4.0 | 4.0 |
| The required textbook(s) were important for my success in this course. | 27 | 32% | 3.8 | 3.6 | 3.7 | 5.0 | 4.0 | 4.0 |
| I would recommend that the instructor continue requiring the textbook(s). | 27 | 32% | 4.1 | 3.8 | 3.7 | 5.0 | 4.0 | 4.0 |
| The required digital and/or other supplemental materials were important for my success in this course. | 27 | 32% | 4.8 | 4.1 | 4.1 | 5.0 | 4.0 | 4.0 |
| I would recommend the instructor continue requiring the digital and/or supplemental materials. | 27 | 32% | 4.4 | 4.1 | 4.1 | 5.0 | 4.0 | 4.0 |
| I found this course intellectually challenging. | 27 | 32% | 4.5 | 4.1 | 4.1 | 5.0 | 4.0 | 4.0 |

Note: 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; 1:Strongly Disagree; -1:Not applicable;

Learning Related Questions

| Question | Number of Responses | Response Rate | Course Mean | Dept. Mean | Univ. Mean | Course Median | Dept. Median | Univ. Median |
|---|---------------------|---------------|-------------|------------|------------|---------------|--------------|--------------|
| I learned a lot in this course. | 27 | 32% | 4.6 | 4.2 | 4.3 | 5.0 | 4.0 | 4.0 |
| I learned to apply course concepts and principles. | 27 | 32% | 4.4 | 4.3 | 4.3 | 5.0 | 4.0 | 4.0 |
| I developed additional skills in expressing myself orally and in writing. | 27 | 32% | 4.3 | 3.9 | 4.0 | 4.0 | 4.0 | 4.0 |
| I learned to analyze and evaluate ideas, arguments, and points of view. | 26 | 31% | 4.5 | 4.0 | 4.1 | 5.0 | 4.0 | 4.0 |

Note: 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; 1:Strongly Disagree; -1:Not applicable;

Instructor Related Questions: Neal Young

| Question | Number of Responses | Response Rate | Course Mean | Dept. Mean | Univ. Mean | Course Median | Dept. Median | Univ. Median |
|--|---------------------|---------------|-------------|------------|------------|---------------|--------------|--------------|
| The instructor possessed the basic communication skills necessary to teach the course. | 27 | 32% | 4.6 | 4.4 | 4.5 | 5.0 | 5.0 | 5.0 |
| The instructor clearly communicated ideas and information. | 27 | 32% | 4.5 | 4.3 | 4.3 | 5.0 | 5.0 | 5.0 |
| The instructor clearly stated the objectives of the course. | 27 | 32% | 4.7 | 4.4 | 4.4 | 5.0 | 5.0 | 5.0 |
| The instructor covered what was stated in the course objectives and syllabus. | 27 | 32% | 4.8 | 4.4 | 4.5 | 5.0 | 5.0 | 5.0 |
| The instructor came to class prepared to teach. | 27 | 32% | 4.8 | 4.4 | 4.5 | 5.0 | 5.0 | 5.0 |
| The instructor used class time effectively. | 27 | 32% | 4.6 | 4.2 | 4.3 | 5.0 | 5.0 | 5.0 |
| The instructor provided sufficient feedback. | 27 | 32% | 4.5 | 4.1 | 4.2 | 5.0 | 4.0 | 5.0 |
| The instructor fairly evaluated my performance. | 27 | 32% | 4.4 | 4.3 | 4.4 | 5.0 | 5.0 | 5.0 |
| The instructor is someone I would recommend to other students. | 27 | 32% | 4.5 | 4.2 | 4.3 | 5.0 | 5.0 | 5.0 |
| The instructor treated students with respect. | 27 | 32% | 4.7 | 4.5 | 4.6 | 5.0 | 5.0 | 5.0 |
| The instructor acknowledged and took effective action when students did not understand the material. | 27 | 32% | 4.7 | 4.3 | 4.3 | 5.0 | 5.0 | 5.0 |
| The instructor was available to assist students outside of class. | 27 | 32% | 4.4 | 4.3 | 4.4 | 5.0 | 5.0 | 5.0 |
| The instructor displayed enthusiasm for the course. | 27 | 32% | 4.7 | 4.4 | 4.5 | 5.0 | 5.0 | 5.0 |

Note: 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; 1:Strongly Disagree; -1:Not applicable;

Instructor Effectiveness: Neal Young

| Question | Number of Responses | Response Rate | Course Mean | Dept. Mean | Univ. Mean | Course Median | Dept. Median | Univ. Median |
|--|---------------------|---------------|-------------|------------|------------|---------------|--------------|--------------|
| What is your overall rating of this instructor's teaching effectiveness? | 27 | 32% | 4.7 | 4.3 | 4.4 | 5.0 | 5.0 | 5.0 |

Note: 5:Almost Always Effective; 4:Usually Effective; 3:Sometimes Effective; 2:Rarely Effective; 1:Never Effective;

Course Related Questions (15 comments)

Q: Please comment on the strength and/or weakness of the required textbook/course materials.

- 1 Lecture notes were arbitrary, and overly complex, and did not make basic material clear or understandable.
- 2 The homeworks were by far the best tool for me to learn in this class. I felt that they were very well designed and provided a good challenge.
- 3 Lecture notes were very well written, thorough, and comprehensive.
- 4 Professor Young created some really great lecture notes and homework problems along with solutions for everything and references to practice problems or other resources embedded in the notes that he makes. All of this was extremely helpful!
- 5 There's no textbook, but there are lecture notes which serve basically the same function. They're pretty good and you need to know them to do well on the homeworks and tests.
- 6 There were no textbooks that were required, though some optional ones were available for reference/practice. However, the lecture notes posted online are absolutely crucial to your success in this course.

A word of advice to future students...this may sound dumb...but if an algorithm or proof doesn't make sense, just stare at it...trust me...it actually works and you will figure it out.
- 7 Lecture notes were very helpful
- 8 The lecture notes were vital as well as the homework.
- 9 Lecture notes were meh, but I know a lot of students in this course just stopped coming to lectures and read the notes instead, so they

may have had a different experience than I.

- 10 Amazing lecture notes!
- 11 The lecture notes had a habit of explaining relatively simple topics in a way that was needlessly confusing.
- 12 The lecture notes posted on Blackboard were very thorough and helpful. They were the best lecture notes I have ever gotten from a professor. Tip: read the lecture notes before class and you can engage with the actual lecture more. The supplementary textbooks referred to in the lecture notes weren't necessary, but were sometimes helpful to see more examples. They can also be found free online.
- 13 The lecture notes provided seemed at times a bit cluttered. Sometimes they were good but at other times difficult to comprehend. As a result of the course being pretty difficult by its nature, a lot of student rely on lecture notes to effectively learn the material. Often I found myself looking at the lecture notes, not understanding, and just googling the concept instead.

Granted, they were alright at times.
- 14 The online lecture notes and the homeworks for this class are super helpful for learning the material. The homeworks look like the lecture notes, and the exams look like the homework, so this course is what it advertises itself as.
- 15 There is no required textbook for the course (at least for Prof. Young). Instead we had lecture notes for every topic (that I believe were created by Prof. Young) which had references to various textbooks if you were interested in exploring a topic more. The lecture notes were very well put together and easy to understand, with very logical ordering of information, solid explanations, and plenty of examples. Overall, just incredibly helpful, so I rarely felt the need to use a textbook or other external sources.

Learning Related Questions (12 comments)

Q: Please comment on the strengths of this course and/or ways to improve this course.

- 1 11/10 would not change a thing I love Neal Young.
- 2 The lecture notes written by Neal are a bit long and tedious to read and understand, but they're very thorough and logical. I'm really glad for them
- 3 This course is very necessary as its the only course I've taken so far that offers insight into how to come up with algorithms and how to prove algorithms are correct.
- 4 There is a lot of breadth in this course but I think attending office hours regularly definitely helps and the TAs were really useful.
- 5 It's a hard course to teach. For me, I would prefer a more application-based approach, with more coding assignments, to practice implementing the algorithms. The class was mostly proofs, and while I understand why the professor does this, I feel that more coding assignments and fewer proofs would help me better understand how and where to use each algorithm.
- 6 While the class taught a decent amount, it did not connect it to how I could use it in the workforce. This was an extremely academic course, and we didn't go much deeper than theoretical proofs (for example, I believe there were only two occasions where we implemented algorithms using CODE)
- 7 The course was well structured. I appreciated that there was a lot of focus on writing proofs. It is much better than some other algorithms classes that only cover preexisting algorithms without focusing on proving correctness. I think the example proofs we covered were also well chosen and were good for showing the drawbacks of certain types of proof designs (greedy algorithms vs dynamic programming, for example)
- 8 The course is very well organized, the last few topics kind of flew at us a bit fast and have been difficult to digest but the rest was well-paced.
- 9 I found this course is very intellectually challenging. I think the format of the class is already good. One change I would make is I would provide students with more guidance or examples when it comes to formal proof conventions and notation.
- 10 The course material does run quite dry most of the time...since its algorithms. I'm not sure of what ways are possible to improve that. However, it was straightforward and we as students knew pretty much what we were expected to know.
- 11 Strengths of the course include the amount of material covered, the structure of the course, and the development of proof and logic.
- 12 You learn a lot of material in this course, but I personally found it manageable because of the learning environment. The course staff want you to succeed: there are extra credit incentives for turning in homework early (5% / 10%), you can work with others on homework as long as you write up your answers separately and list each other as collaborators, you can respond on homework questions with "I don't know" followed by your questions for grader feedback and receive 25% of the question's points instead of just randomly guessing, and student questions are always answered on Piazza. The learning environment felt extremely supportive, so even when we were covering a concept that was difficult to me, I never felt defeated.

We had a problem set due every week (formatted with LaTeX), two midterms, and a final. It was manageable as long as you started work early.

Instructor Related Questions: Neal Young (19 comments)

Q: Describe instructor's strengths, areas for improvement, and any additional comments.

- 1 Teacher made material rather difficult to understand, and made it overly complex. Sometimes made students feel stupid for not understanding complex topics immediately.
- 2 Professor Young took advice and critique of the class better than any professor I have had at Northeastern. He worked with the students so that we all would get the most out of this class. I found the lectures to be not the most interesting/engaging, but they were informative and helped me learn. Additionally, the homeworks were great and I enjoyed the challenge of solving them.
- 3 The attentiveness he had to posts on Piazza was remarkable. He responded to all posts very fast and edited posts for clarity. Posted updated office hours each week, provided practice exams, etc. Easily the most prepared and helpful professor I've had. Can't praise him enough.
- 4 Professor Young was incredible and had really great lectures, was very responsive to messages on Piazza, and seemed to really take into consideration student feedback. The one issue I noticed was that right before the final, he seemed overloaded with finishing grading, creating the exam, and creating practice materials for said exam and never got to releasing study materials. I definitely think this negatively affected my performance on the final compared to on both midterms since these resources were available. I think having another professor involved as opposed to Prof Young just having a ton of TAs would have helped this, but I'm not sure if this is only this semester's experience and actually due to the fact that Prof Young had to take over a section for another professor who had to take time off.
- 5 I think he is sometimes a little quiet, and during a few of the more complex proofs it is a little hard to follow the logic, but overall he is very good.
- 6 Piazza questions were usually answered really quickly. He also was pretty specific about what you needed to know to do well on the exams. He can be a little quiet sometimes, but as long as nobody in the lecture is having side conversations it's fine.
- 7 This course can be boring and dry because of the topics. But Prof Young is an absolutely amazing professor. He truly puts in time and effort for students to succeed, even with over 200 students. He always answers Piazza questions within the hour, and he clearly communicates algorithmic concepts and gives appropriate feedback when grading.

Prof Young truly cares for the success of his students. A couple times in the semester, there would be times where we felt the grading was "unfair" or "imperfect". Neal took the time and effort to listen to feedback and improve the course. For our final, he was taking feedback and tweaking the final exam format for TWO full days, leading right up to exam day, listening to what suggestions we had to make it as fair as possible. I have never met anyone that cared as much as he did on his students' successes.

He is certainly qualified to teach this course. He can be soft spoken in class a little bit, but just pay close attention and you will be fine.

- 8 Lectures were somewhat confusing but Professor Young was very good at answering questions in class and on piazza
- 9 Awesome professor, really took the time to make sure students understood the material. Lectures were very well presented and he made the concepts very clear and readily digestible.
- 10 Neal is a pretty good lecturer.
- 11 Neal Young pls stay here stay at northeastern we need you pls. If you leave then gack
- 12 Neil Young is absolutely amazing. He's easily one of the best professors I've ever had. He really cares about his students and works insanely hard to help them succeed. His lectures are interesting and easy to understand. He uses excellent real life examples to get us excited about an algorithm and gives great explanations behind each topic. I had never encountered a professor who was so dedicated to his students and making sure they understand the material. He's extremely dedicated to his job, and somehow finds the time to answer every student question on Piazza. If I had one complaint about this semester, I would say that Neal Young is overworked. Being the only professor for one of the largest computer science courses on campus seems like way too much work for one professor. Before taking Neal Young's algo, I didn't enjoy the algorithms part of computer science. I didn't understand discrete very well, and I really struggled with logic and comp. Neal Young changed all that. He spoke my language and found ways to explain complex topics in a way I could understand. He clearly broke down intimidating and confusing subjects, and worked extremely hard to guarantee that every student understood.

Anyways in summary:

Future students: take any course with Neal Young you can, he's absolutely incredible. If I could take every course with him, I would.

Khoury Staff: This man deserves a raise and some time off. He worked insanely hard this semester, and he's an incredibly talented teacher.

Neal Young: This was an amazing course, thank you so much. Know that your students really appreciate the countless hours of hard work you put into making this course. Please have a wonderful winter break and enjoy some time off with your family, you deserve it.

- 13 The tests had "gotcha" questions, however, they were worth a significant portion of the grade. For example, nearly 40% of the second midterm was 3 multiple choice questions with little/no partial credit.
- 14 Neal Young is a very good professor, tied with the best professors I've had in the at Northeastern. He was very attentive to student's

needs and cares a lot about how well you understand the material. His grading is pretty fair. If an assignment is hard, it's because he wants you to have a deep understanding of the material. He is also very accessible outside of class. I've never had a professor who was so responsive on Piazza as he was.

- 15 Professor Young is a very nice person. At times his lectures are a bit dry but he clearly understands the material and when people ask questions in class he always answers them.

I think if he could get the class more engaged that would aid in the understanding of material.

Proofs are important, but understanding should come first.

Overall Great!

- 16 He sometimes spoke a bit quietly and his handwriting was on the slightly messier side, but he's very clear and understanding. He's especially patient with questions, and answers all private piazza posts in very good time.
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- 17 Neal is a great professor. He provides great lecture notes and homeworks. His lectures themselves are informative and he provides enough examples that I am able to understand 99% of the concepts he teaches.
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- 18 Other than talking quietly, Neal was the perfect professor. He is always on piazza and will answer your question within minutes. He is great at teaching and his tests are hard but fair. One of the first homeworks had a question that some people thought was sexist and he reworded it immediately and apologized.
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- 19 I would recommend Prof. Young for Algo to any of my friends. He was very knowledgeable, always prepared for class, and was great at answering student's questions. I also found his explanations of the material very easy to follow, and he makes a sincere effort to go over examples and clarify concepts until there's an overall understanding within the class. On our Piazza, the vast majority of instructor responses were made by Prof. Young himself rather than by TA's, which I mention just to emphasize the time he put into clarifying students' uncertainties. Overall, I found him to be a professor who very much invested in teaching, and was good at it too.