

Instructor: **Holtzen, Steven**Subject: **CS**Catalog & Section: **5400 01**Course ID: **30672**

Objectives:

Enrollment: **56**Responses Incl Declines: **24**Declines: **0**

Instructor Related Questions: Steven Holtzen (40 comments)

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

- 1 Professor Holtzen is a good lecturer and is effective at conveying course content in an interesting and engaging way. He is effective at answering questions and explaining the reasoning behind concepts and ideas in the course.

I enjoyed the first part of the course, and in particular the more theoretical programming language information and design aspects of the course. The PLAI textbook was a great reference material and I think that the way concepts like the lambda calculus, basic type systems, and other general concepts were taught was great and very engaging.

Homework assignments were generally very manageable and graded fairly. I think that they effectively expanded on concepts learned in lecture and were effective in improving my understanding of the course content.

I overall think that this class was great and I generally enjoyed it and learned a lot.
- 2 I really enjoyed the way the instructor taught this class. I was able to follow along easily, stay engaged, and complete all the assignments. The pace of the class was good and I learned a lot. The instructor responded well to feedback and made necessary course adjustments based on student feedback as the semester went on.
- 3 Professor Holtzen is enthusiastic and good at explaining difficult concepts. Grading was fast and homeworks were super interesting. The particularly hard ones were justifiably so and covered fascinating material; if anything I think some of the other assignments could be harder to really dig into the topics. Plait and OCaml were both useful tools and good language choices. Also PLAI is a fun and very informative textbook. I'm glad it was the recommended reading.
- 4 The lectures posted online were very detailed and posted promptly after each classtime. I think the questions on the homeworks and quizzes really pushed me to learn deeper about the concepts which I appreciate!
- 5 great guy
- 6 Prof. Steven Holtzen is one of the coolest researchers I have ever met in the field of computer science so far. I like the fact that he is always energetic, enthusiastic, and willing to help us no matter what our current learning levels are. The course is also challenging and fun as well. I like all the topics that we have covered this semester, and I think it will be very useful for CS students to have a better understanding of various kinds of programming languages.
- 7 Professor Holtzen is extremely passionate and knowledgeable on the state-of-the-art for programming languages. He is a great lecturer and all of the homeworks were very interesting to figure out. I feel that this course truly gave me an understanding of what makes up a programming language and how that knowledge can be applied to solving problems in the real world that I will carry with me into the future.
- 8 Knowledgeable of course topics, heavily invested in making the course better by asking and responding to student feedback
- 9 The professor's well-written notes and well-maintained website for this course are super helpful. The lectures are always interactive.
- 10 Prof. Holtzen did an amazing job with teaching the course. He took the time to feel out if students were clicking with the material or not and paced the course based on the students and updated the curriculum to reflect modern changes in programming languages.
- 11 Steven is clearly very passionate about programming languages and research, which made it very fun to come to class and learn, especially as someone with not a lot of background in studying programming languages.
- 12 passion
- 13 Steven was obviously very knowledgeable and cared about teaching the students the material. Assignments started off simpler and got more challenging, but were doable and with office hours, it was fine.
- 14 Prof Holtzen made the class time fly. He was always enthusiastic about the course subjects which made paying attention in class very easy. This is my last semester at Northeastern and I can say that Prof Holtzen is the best professor I've had during my 4 years here.
- 15 Professor Holtzen was fantastic for this course. It was his first time teaching it, but you can tell how passionate he is about the content. The assignments and quizzes were quite challenging at times, but they were all very doable and within the realm of what we had learned from lectures and had available to us in the notes. Each lecture built upon the last, which made it important to keep up, but if you did stay on top of things the challenging content was a lot less intimidating in the smaller pieces.
- 16 I think he was really passionate about programming languages and really strived to improve as a professor. He encouraged all sorts of questions and always promised to answer them even if there wasn't enough time during class. The course overall was pretty challenging.

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

- 1 The first major point of improvement that I see are the quizzes. Quizzes in this class were very long and I frequently found them to be more difficult than the homework assignments. Generally, especially when homework is (partially) autograded, I think it works better for quizzes to be easier checks of understanding in a limited timeframe, while homeworks might be more conceptually difficult to figure out, so I think it could be useful to consider reversing the difficulty of these types of assignments.

However, my largest issue with the quizzes was that many of the quiz questions were under-specified or generally unclear. These included both multiple choice questions with unclear meanings or indications, as well as coding problems that felt under-specified in requirements and did not effectively describe the expected output. I think that these quizzes could be improved to be more clear which would make them less stressful.

Additionally, I think I would have preferred the original schedule of this course before it was changed to focus on OCaml and a bit of Rust. I am personally more interested in programming languages from a theoretical perspective and I was looking forward to some overviews of PL concepts rather than switching to learning about specific languages like OCaml and Rust - I think we spent more time introducing these languages than was worth, and I think that staying with Plait to continue to introduce interesting topics as was planned more originally would have been interesting.

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

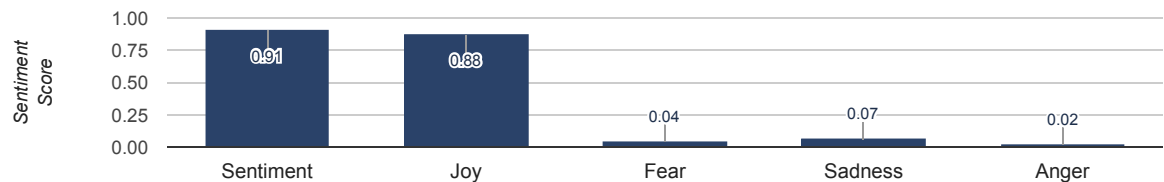
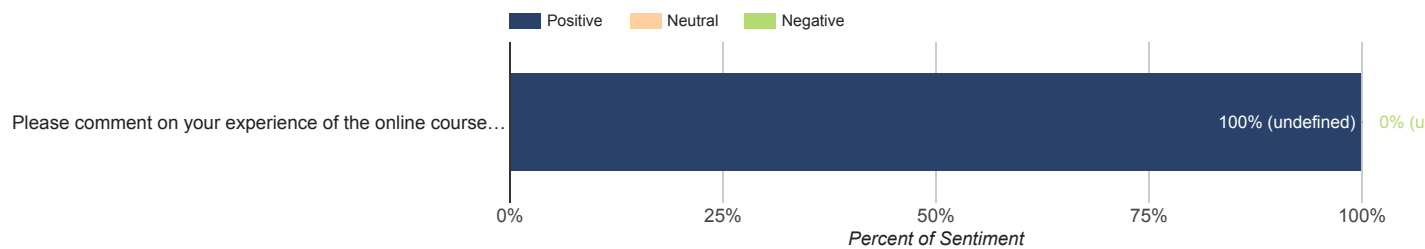
- 2
- Leaning more into the theory side would be great. The derivation tree unit was awesome and I would like to see more of that, especially since this is the only general PL course (Compilers seems much more specific)--we already get more "practical" material from myriad programming-heavy courses.
- In a similar vein, a lot of my upper division courses have at times turned into "watch code get speed-typed and/or copy-pasted into a text editor for 100 minutes" which isn't the most interesting style of lecture, even when the instructor is interactive and engaging like Professor Holtzen. There are lots of cool concepts in this course which are well served by whiteboard usage and slide decks (and we did have lectures that incorporated those, I just want to further encourage it).
- I might be in the minority opinion here, but I would have preferred the originally scheduled end-of-semester pacing which surveyed several topics in short stints, as opposed to the more in-depth looks at memory management and continuation-passing style. This is just because of what I said earlier about this being the only general-purpose PL class for undergrads. More topics and a wider range of "here's a feature that languages can do" is better in that context.
- Anyway that's all minor feedback, my only major gripe was that the wording on quizzes was consistently bad/ambiguous. The course staff handled the fallout from this well on Quiz 1, but keeping a closer eye on clarity for future semesters would be good. In general, my opinion is that homeworks are the place for really puzzling and in-depth problems which give students something to wrangle with, while summative assessments should be more straightforward (trick questions are bad!) and time-boxed. In this class it was kind of the opposite: with a couple exceptions the homeworks were straightforward, while quizzes were much more intensive and were really what raised my average hours per week spent on the class.
- 3
- Sometimes there were quiz questions that felt vague and confusing.
- 4
- better testing suite on gradescope
- 5
- This is the first iteration of this course for Prof. Steven Holtzen, so I understand that the quizzes and homework assignments sometimes need a bit of polishing work after they are released. I think this minor issue won't bother future students in the following iterations.
- 6
- I really appreciated how quizzes were administered with no fixed duration, we were just given 2 days in which to complete them at our own pace. However, there were many issues with buggy/inconsistent autograders for quizzes that led to undue stress while attempting to submit. Also, there were often cases where the quiz write-ups were not consistent with the starter code (or confusing to understand) that had to be addressed on piazza. I feel that if the autograders were tested more before the quizzes, and the write-ups given more attention, it would have greatly improved the overall experience.
- 7
- Logistical things like homework/quiz typos and lecture things like accidentally using shorthand on the whiteboard/forming explanations that don't 100% land with students will be ironed out with more semesters to come. Godspeed
- 8
- Personally, I think three languages in a course is too many. We may explore the possibility of using Ocaml at the beginning instead of Plait in the first half and switching to Ocaml in the middle.
- 9
- Nothing I can think of.
- 10
- Smoother learning curve
- 11
- It's his first time teaching this course, so I'm sure it'll get better. The starter code for the quizzes and homeworks could've been double-checked to catch errors. Certain quiz questions could also be refined to avoid ambiguity. More TA's/office hours would also be helpful.
- 12
- I would have liked more of a set/consistent homework schedule week to week as to better help with my homework planning.
- 13
- I liked the style of the quizzes being take home and having 48 hours, but they were frequently due right after assignments. There were 2 or 3 weeks this semester where the assignment was due Wednesday and the quiz was due Friday, which meant I inevitably spent several hours a day M-F on just this class. I understand it is a busy and challenging class, but it felt like some of the deadlines could have been spread out a little more. There were also a few instances of problems needing clarification or the auto-grader being broken, but that is understandable since it is his first time teaching this class.
- 14
- I think the quizzes were really vaguely worded, but you can tell they were trying to work on this as the semester progressed. A lot of the times, the instructor responses on Piazza were not helpful and just restated what was in the question.
- 15
- Prepare the quiz better, for example, some of the instructions aren't clear and sometimes confusing to find out what exactly the question is asking.

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

- 1
- Professor Holtzen is very inclusive and great at making everyone feel comfortable in class.
- 2
- Steven was a great professor, and especially considering this is his first time teaching the course, it was really effective and manageable. The issues we faced throughout the semester will probably be fixed for the near future.
- 3
- Professor Holtzen always welcomed questions and met students where they were at. No complaints!
- 4
- The professor is very knowledgeable and picked interesting topics for this programming languages class. He explained the concepts well and provided many practice problems in the lectures.
- 5
- flexible learning material based on the realities of the field. interesting stuff
- 6
- I don't think there is anything that needs to be improved for this course.
- 7
- They fostered an inclusive learning enviroment.
- 8
- Overall, Professor Holtzen did a fantastic job running this course, and I have highly recommended some of my friends to take this class with him in the fall. I have never been to interested in some research topics, but I still found the content very interesting and learned a lot. It is also worth mentioning that his 3 TAs were all outstanding. Even though there were only 3 of them, they were just as good as professors in terms of their knowledge and understanding of the content.
- 9
- Prof. Holtzen was great. If he repeats what he did this semester, it'll continue to be a great and educational class.

Questions to Assess Students' Online Experience (6 comments)

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



- 1 Not an online course environment but lectures were posted online that were detailed and useful. ★★★★★
- 2 super good class! ★★★★★
- 3 We only had one online lecture for this course, and I think it was excellent! ★★★★★
- 4 Instructors were very responsive on Piazza and were always super respectful with their replies. ★★★★★
- 5 Very good ★★★★★
- 6 The online notes were really helpful to read during and after lectures. ★★★★★

Student Self-Assessment of their Effort to Achieve Course Outcomes (9 comments)

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

- 1 Paid more attention in lecture
- 2 I would do more additional outside research on the different topics we learned in class because I know there is a lot more to learn about CPS, garbage collection ,etc that can be helpful in the future.
- 3 pay more attention in class
- 4 Read more textbooks maybe? I feel like I am not using textbooks enough, even though the course materials are very helpful.
- 5 Reading the lecture notes before lectures instead of during/after.
- 6 Paid attention in class more
- 7 I think sometimes I tried to rush straight into an answer without really considering it first. Once I would figure something out I would realize that looking back I really just needed to slow down and understand it better first.
- 8 Course was organized perfectly to allow me to succeed without any other necessities.
- 9 I probably should have attended more office hours