Compilers (Fall 2018)

Instructor: **Shivers III, Olin**
Subject: **CS**
Catalog & Section: **6410 01**
Course ID: **17968**
Objectives:

Enrollment: **21**
Responses Incl Declines: **10**
Declines: **0**

Course Related Questions (7 comments)

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

1	The text book is very good.
2	I'm not sure if I like SMLNJ as a language. All our files are massive piles of spaghetti, and that's probably due to our inexperience with the language, but I feel like understanding how sig/struct and stuff like datatype works would've helped.
3	The assignments can't really be done without the textbook and the online materials that come with it.
4	Textbook/course material is good and available in other languages too. It would be a good practice to implement a compiler in a widely used high level language (c/c or java). The book guides one well but have erratas. I would recommend to go through erratas list before reading chapters.
5	The textbook is good for this class but the diagrams are usually far away from their descriptions and it takes a while to get a feel for what code is necessary to put in your compiler and what code is garbage. Good book.
6	It was a very good textbook that we pretty much followed to a T for the whole class.
7	The textbook was one of the most readable technical works I've seen, and also HIGHLY HIGHLY important to succeeding in the course. This isn't an "optional" textbook for the course, you need to buy it and you need to read it. Probably more than once

Learning Related Questions (5 comments)

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

1	The depth of this class is really good.
2	The course covers a lot of material so I learned a lot not just about compilers but also about optimizations, computer architectures, etc. One way to improve the course, is to have a first assignment about SML, before the lexer. (I know we had an informal one) but I think most of my struggles came from SML. Another point, is to have 2 TAs for the class (or as many as the class needs). The comments and feedback from the TA are very valuable and he did a really great job, but it is so time consuming and I don't think one person is enough to grade everyone on time. Again, I am not blaming the TA, I just think he could have used some help.
3	Phenomenal course. Has a reputation for being extremely difficult, I don't think it was 'extremely' difficult but it was up there in the top few most difficult courses I have taken. The assignments quickly scale in difficulty and as Olin says 'You lose it out here, you're in a world of hurt'.
4	There were a lot of heavy topics right at the end and easier ones at the beginning. I think if we spent less time on topics at the beginning and more time on topics at the end like register allocation the course would be improved.
5	VERY challenging and VERY rewarding. Definitely believe it is the hardest course in CCIS, there's just so much to cover in so little time. Pretty much every unit/assignment covers and entire subfield of computer science you could take a semester-long course on, so the name of the game is learning just enough to understand what you need to do for the assignment and not waste any more time (as you'll need it for the next one). I can honestly say that I did not keep up with the workload and my grade suffered for it, but I'm still happy that I took it and happy with the grade I got. Don't take this course if you need your GPA to be perfect, but do take it if you want a crash course in just about everything that is computer science. The only way I could see making this course easier is either skipping over certain units or providing starter code for each assignment with more meat on its bones than the skeletons provided by the course material, but I'm not sure either would have helped me understand the material better

Instructor Related Questions: Olin Shivers III (6 comments)

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

1	Very inspiring.
2	The professor clearly knows a lot about compilers. He is very enthusiastic about it and transfers that to the students.
3	He comes to class prepared. He interacts with students in class which helps in understanding the material. He appreciates questions asked by students and answers them efficiently.
4	This is a great course and I would recommend it to anyone. I have one complaint- the number of hours required to complete the assignments is not reasonable and doesn't support the learning objectives. I felt that the same learning objectives could have been achieved and the hours required reduced if the assignments came with a bit more instruction and/or scaffolding. Unfortunately, for me personally I spent hours and hours just completing the "grunt-work" programming before I could focus on the real objectives / learning outcomes for each assignment. Towards the end of the semester, the load became particularly unbearable, I had to stop all other research efforts and basically focused all my attention on completing the assignments for this course. I would have enjoyed the assignments more, and I think I would have gotten more out of them had I been provided a bit more scaffolding to start from, thus requiring less "grunt-work" programming and allowing more attention to the particular details of the individual assignment.
5	I did not appreciate how great it is to take a class with an awesome professor until now. I didn't even care about compilers when I signed up for this course. Signed up because of the professor. It was the right move. Like others have said, this is one of the few courses that make your undergrad worth it.
6	I've had Shivers before for logic and comp, and its a treat to see him be able to cover the higher-level stuff that he's clearly enthusiastic about. He often goes on tangents about various topics - sometimes directly relevant to the course material and sometimes not, but I personally found all them enjoyable. Kept his promise to help us succeed but also "give us the gun to shoot ourselves in the foot". I do wish assignments had been graded quicker, as each built on the last, but I can see how grading these assignments would be a ton of work for just one TA