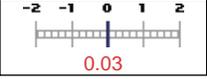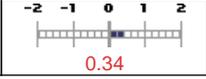# CS 2150-001 **Program & Data Representation** - Spring 2016

ENGR (17471)

INSTRUCTORS: **Bloomfield, Aaron S. (asb2t)**

Respondents: 117 / Enrollment: 156

Summary: CS 2150-001 Program & Data Representation - Spring 2016 (17471)

Overall Course Rating	Overall Instructor Rating
CS-2150-001 Mean 4.08 CS-2150-001 Std Dev 1.19 CS-2150-001 Response Count 584	*INSTRUCTOR:* Bloomfield, Aaron S. Mean 4.54 Std Dev 0.75 Response Count 815
Difference from Category Mean, Expressed in Category Standard Deviations — 0.03	Difference from Category Mean, Expressed in Category Standard Deviations — 0.34
SEAS, 2000-level courses Mean 4.05 SEAS, 2000-level courses Std Dev 1.00 SEAS, 2000-level courses Response Count 16344	SEAS, 2000-level courses Mean 4.24 SEAS, 2000-level courses Std Dev 0.89 SEAS, 2000-level courses Response Count 23150

~ QUESTIONS AND DETAILS ~ / ~ ANSWER MATRICES ~

1. The course addressed technically rigorous subject matter consistent with the course objectives.

~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	4.78	0.54	95 (81.20%)	20 (17.09%)	1 (0.85%)	0 (0.00%)	1 (0.85%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3272	4.38	0.72	1590 (48.59%)	1389 (42.45%)	213 (6.51%)	38 (1.16%)	23 (0.70%)	19 (0.58%)

2. The instructor used methods other than/in addition to traditional lectures (for example, active learning, in-class problems, collaborative learning, in-class discussion) effectively in this course.

~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
116	4.15	0.94	49 (42.24%)	43 (37.07%)	13 (11.21%)	8 (6.90%)	1 (0.86%)	2 (1.72%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3312	4.06	1.01	1289 (38.92%)	1237 (37.35%)	411 (12.41%)	213 (6.43%)	83 (2.51%)	79 (2.39%)

3. There was a reasonable level of effort expected for the credit hours received.

~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	3.36	1.55	44 (37.61%)	17 (14.53%)	11 (9.40%)	27 (23.08%)	18 (15.38%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3267	4.09	1.00	1294 (39.61%)	1392 (42.61%)	265 (8.11%)	204 (6.24%)	104 (3.18%)	8 (0.24%)

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~

4. The homework assignments helped me learn the subject matter.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	4.63	0.58	78 (66.67%)	33 (28.21%)	3 (2.56%)	1 (0.85%)	0 (0.00%)	2 (1.71%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3265	4.17	0.91	1286 (39.39%)	1278 (39.14%)	318 (9.74%)	136 (4.17%)	54 (1.65%)	193 (5.91%)

5. The textbook increased my understanding of the material.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
116	3.39	1.10	10 (8.62%)	6 (5.17%)	21 (18.10%)	5 (4.31%)	2 (1.72%)	72 (62.07%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3268	3.55	1.15	487 (14.90%)	718 (21.97%)	548 (16.77%)	245 (7.50%)	138 (4.22%)	1132 (34.64%)

6. The course material was well organized and developed.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
115	4.68	0.57	83 (72.17%)	28 (24.35%)	3 (2.61%)	1 (0.87%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3310	4.03	1.01	1205 (36.40%)	1358 (41.03%)	379 (11.45%)	231 (6.98%)	89 (2.69%)	48 (1.45%)

7. The instructor was knowledgeable about the subject matter.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	4.86	0.39	103 (88.03%)	12 (10.26%)	2 (1.71%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3310	4.55	0.68	2032 (61.39%)	1025 (30.97%)	133 (4.02%)	30 (0.91%)	21 (0.63%)	69 (2.08%)

8. The instructor was well prepared for class.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
116	4.81	0.47	97 (83.62%)	17 (14.66%)	1 (0.86%)	1 (0.86%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3305	4.35	0.83	1673 (50.62%)	1190 (36.01%)	257 (7.78%)	84 (2.54%)	41 (1.24%)	60 (1.82%)

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~

9. I received adequate preparation from the prior courses in the curriculum to be successful in this course.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	3.80	1.06	34 (29.06%)	41 (35.04%)	23 (19.66%)	14 (11.97%)	2 (1.71%)	3 (2.56%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3272	3.85	1.05	854 (26.10%)	1198 (36.61%)	490 (14.98%)	235 (7.18%)	104 (3.18%)	391 (11.95%)

10. The grading policy was fair.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	4.03	0.97	42 (35.90%)	50 (42.74%)	14 (11.97%)	9 (7.69%)	2 (1.71%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3311	4.12	0.90	1224 (36.97%)	1466 (44.28%)	377 (11.39%)	158 (4.77%)	49 (1.48%)	37 (1.12%)

11. The instructor responded adequately to in-class questions.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	4.59	0.62	76 (64.96%)	35 (29.91%)	5 (4.27%)	1 (0.85%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3303	4.36	0.78	1597 (48.35%)	1328 (40.21%)	199 (6.02%)	75 (2.27%)	29 (0.88%)	75 (2.27%)

12. The instructor effectively used technology in support of the learning goals for this course.
~
Question Type: Likert
~
contributed by Dean of the School of Engineering and Applied Science

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
117	4.66	0.62	85 (72.65%)	25 (21.37%)	6 (5.13%)	1 (0.85%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
3299	4.23	0.87	1417 (42.95%)	1290 (39.10%)	334 (10.12%)	119 (3.61%)	40 (1.21%)	99 (3.00%)

13. The average number of hours per week I spent outside of class preparing for this course was:
~
Question Type: Multiple Choice
~
contributed by Office of the Provost

Results for CS-2150-001

Total	Less than 1 (NA)	1 - 3 (NA)	4 - 6 (NA)	7 - 9 (NA)	10 or more (NA)
117	0 (0.00%)	4 (3.42%)	16 (13.68%)	35 (29.91%)	62 (52.99%)

Results for SEAS, 2000-level courses

Total	Less than 1 (NA)	1 - 3 (NA)	4 - 6 (NA)	7 - 9 (NA)	10 or more (NA)
3272	237 (7.24%)	1150 (35.15%)	1191 (36.40%)	413 (12.62%)	281 (8.59%)

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~

14. I learned a great deal in this course.
~
Question Type: Likert
~
contributed by Office of the Provost

Results for CS-2150-001

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
116	4.66	0.62	84 (72.41%)	27 (23.28%)	3 (2.59%)	2 (1.72%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
3261	4.19	0.89	1379 (42.29%)	1349 (41.37%)	352 (10.79%)	134 (4.11%)	47 (1.44%)

15. Overall, this was a worthwhile course.
~
Question Type: Likert
~
contributed by Office of the Provost

Results for CS-2150-001

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
117	4.62	0.71	83 (70.94%)	27 (23.08%)	3 (2.56%)	4 (3.42%)	0 (0.00%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
3257	4.12	0.97	1341 (41.17%)	1271 (39.02%)	403 (12.37%)	169 (5.19%)	73 (2.24%)

16. The course's goals and requirements were defined and adhered to by the instructor.
~
Question Type: Likert
~
contributed by Office of the Provost

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
116	4.66	0.62	83 (71.55%)	29 (25.00%)	3 (2.59%)	0 (0.00%)	1 (0.86%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
3300	4.29	0.78	1444 (43.76%)	1504 (45.58%)	248 (7.52%)	73 (2.21%)	31 (0.94%)

17. The instructor was approachable and made himself/herself available to students outside the classroom.
~
Question Type: Likert
~
contributed by Office of the Provost

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
117	4.29	0.90	60 (51.28%)	38 (32.48%)	14 (11.97%)	3 (2.56%)	2 (1.71%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
3303	4.28	0.81	1512 (45.78%)	1345 (40.72%)	336 (10.17%)	84 (2.54%)	26 (0.79%)

18. Overall, the instructor was an effective teacher.
~
Question Type: Likert
~
contributed by Office of the Provost

Results for CS-2150-001, Bloomfield, Aaron S.

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
117	4.58	0.82	82 (70.09%)	29 (24.79%)	1 (0.85%)	2 (1.71%)	3 (2.56%)

Results for SEAS, 2000-level courses

Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
3317	4.18	0.96	1481 (44.65%)	1257 (37.90%)	348 (10.49%)	148 (4.46%)	83 (2.50%)

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~

19. Please make any overall comments or observations about this course:
~
Question Type: Short Answer
~
contributed by Office of the Provost

Results for CS-2150-001	
Total	Individual Answers
70	*See below for Individual Results*

hard class

Overall a very good class in my opinion. I think I learned a lot over the course of this class, however I believe that many of the labs could use a rewrite. There were a lot of lab reports and not much programming towards the end of the semester, and many of the reports seemed like things which should have been 5-10 minutes in lecture rather than a lab report. My main concern is that if a student does something incorrectly in the report, he/she will never learn that concept correctly, since lab feedback is minimal. For example, if you did not understand the memory layout very well in the assembly labs, then you probably will still not understand it well at the end of the class. In addition, if you misunderstand something, there seems to be a good chance that the grading will not specifically address that, and thus the misunderstanding will be perpetuated. I enjoyed the programming assignments, and I do not think that the types of investigations done in the reports are bad, but maybe they could either be Incorporated into a programming assignment that explicitly requires understanding of the concepts in order to ensure that they are understood by students.

TA's were extremely helpful in explaining concepts. Professor Bloomfield was also extremely helpful in explaining unclear concepts during his office hours. He would draw things out and go slowly over the material, which helped me see things differently.

Great course, learned a lot, work was reasonable and very helpful

I really enjoyed all the material that I learned by doing the labs, even though I went through some painful times. :-/

This course was quite difficult. Coming straight from almost no coding from CS 2110 to this was a slap in the face, and I felt like the test questions did not reflect important material to be attained from the course.

Looking forward to Win10 Bash! Also, ARM assembly might make learning assembly easier

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~
	Please, PLEASE read the following. I was told these course evaluations matter, and it's the only thing I can do, so I am desperately hoping this will not just be ignored. This class is utterly ridiculous. There is no reason a single one class' work and homework should take up more of my time than EVERY OTHER ONE COMBINED. This is not an isolated case for me, as many other people expressed the same. I was often up until 3 AM finishing the insanely difficult pre labs/labs/post labs he has everyone do, which can be worked on for over 10 hours and STILL not be done. And he has students do THREE of these per week. I have not met ONE student who thinks this was remotely fair or reasonable. It has a reputation to the other CS TEACHERS as being dreaded and horrible, which hopefully says something. The professor himself (Bloomfield) does not seem to have office hours, or if he does, I never saw him at them. Instead, the TAs (who agree with every complaint I have listed here, when I've asked) help- they are the only helpful part of the course, and saviors on the labs, but since everyone is confused and at office hours, it will take over an hour before you can actually get help. Considering the number of failure points one can get stuck on in the coding? You NEED help more than once. Oh, and the constant late nights/MORNINGS spent working on these? They threw off my sleep schedule badly enough that I missed OTHER classes from accidentally sleeping in. I cannot operate on three-four hours of sleep, which Prof. Bloomfield does not seem to care about, as I'm CERTAIN he's gotten these comments before. On that note, Bloomfield (not Floryan, he's nice) is a supreme asshole. I am not one who usually swears, so please understand I say this not in rage, but as WARNING. The tests are graded with insane harshness, not even giving credit for partially right answers or work shown. He somehow steps UP the "honor code" even further, failing people for the tiniest of things, including things that are blatantly NOT cheating. I tried to get help on my code from the TAs early in the semester, and got an email stating I instantly failed the course, because I had posted (incomplete, completely non functional) code online. This despite the fact that it was a website EXPLICITLY designed to get help from the teacher's TAs, and was a resource he TOLD us to utilize. It is impossible to receive help on code, if the person you are asking to help you cannot see it. I managed to go high enough up that it was reversed, after the situation was explained, but apparently, he has failed people for similar minor infractions before. Well, one, that's horrible, since this is a core course where you CANNOT MOVE ON in the CS major without it, and two, maybe if I could FIND his stupid syllabus, which is not exactly easily accessible, I would know what I can and can't do. He has it posted on some website called github, but he never explains how to use that website, and clicking on links will give you the CODE for those pages, which is impossible to read. I STILL have yet to find out how you get to the slides/syllabus (they aren't posted separately, mind!) without flat out saving the link, after asking someone else for it. That is a major problem, as you might imagine. Professor Bloomfield is also keen on taunting his students as if it's somehow funny that we're all mad at him, "celebrating" how we all "survived" his labs, which is definitively NOT funny when everyone legitimately feels that way, and is in fact a huge concern. He also starts off classes by asking how many people hate him now, and saying to put your hands up, which is like asking people to volunteer to shoot themselves in the foot. He also says we should go online to vent our rage at him via the "support requests" option on collab, which is supposedly anonymous, not that we'd ever really know. Only, he has previously started the class by making fun of the people who wrote them. "I get all these drunk emails from people drowning their sorrows and angry at me over the labs, they're hilarious!" This is completely unacceptable behavior from any teacher, let alone one who is already this terrible to his students. Not to mention if you've driven people to DRINK, you should REALIZE SOMETHING'S WRONG. The other professor, Floryan, seems pretty nice from what I've seen. But he isn't the one who makes the test questions, or the labs, and he isn't someone everyone has the option to take (like me). He needs a bigger say in how the course is run, at the very least. This is the WORST class I have ever taken, and I've taken some pretty dang awful classes. Please, PLEASE do something about this guy. He made the entire semester terrible for everyone in the class, and is likely to do it again next semester, since this has evidently been going on for quite some time. I am BEGGING you to not ignore this, or forget about it. Please. This course provided me with a great deal of information on data structures and algorithms, which I have found useful in preparing for interviews. One can definitely tell this course has undergone years of improvement and change. One thing that really really frustrated me was professor office hours. I found that professor office hours, especially Professor Floryan's, were less students actually getting help on their programs and more students grubbing for points back on labs and assessments, and even arguing back to the professor when he told said students that their answer would not get points back during a regrade. I found this a huge waste of everybody's time and unfair towards other students actually at office hours for help and not a grade boost. This is definitely a huge problem across the department, but I noticed it especially in CS 2150. I said my comments in the other course evaluation, which is exactly the same as this one. Confused as to why there are two of the exact same course evaluations for the same class. This is a great course. It's a lot of work, but the course gives as much as it takes. The grading was sometimes very harsh considering the amount of time/work each assignment took Often Professor Bloomfield would refer to topics learned in CS 2110 and 2102 to explain topics form this course. However, I felt that some of the things he referenced were not taught adequately in those two courses, making his connections to these topics harder to understand. This course was hard, but in a way where I ended up learning a lot. N/A N/A .

The information in this document is private and confidential. Please handle accordingly.

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~
	For a 3 credit course the needed to spend on the homework was tremendous. The office TA office hours were minimally helpful at the most, there were not enough ta's that could help and get to everybody any given day. Bloomfield's teaching style basically only presented the information and made no effort to actively teach the harder topics. The only method in place that was used to teach us was a weekly lab that was a combination of three assignments that could have been individual labs themselves. Why heaps and graphs were taught at the end rather than right after trees is beyond me, and having machine code and assembly in the middle of the semester threw me off completely. I believe it would serve better to use the first part of the semester to learn c++ and the various data structures then assembly and machine code at the end. The rigor and pace of this class does not fit into a 2000 level framework, but rather is better suited for a 3000 level.

Aaron Bloomfield lives up to the legend.

The TAs for this class were really helpful and I really appreciated them holding so many office hours. The tutor from the CDC was also really awesome!

While this class is very difficult, Bloomfield does a great job making it as easy as possible.

I learned a ton in this course, and it was definitely worthwhile. My one problem with it was that the tests were a little too specific at times. I feel like testing on the broader concepts more and not focusing on such minuscule things such as emacs commands and memory holes would be a better representation of what we're learning in the course. The labs were very helpful for the most part, but I also feel like I didn't get as much out of the post lab reports as I should have for the amount of time they took, and maybe shortening the amount required to include would have been more efficient.

I really enjoyed this class. Bloomfield is a great instructor, and even though a lot of the labs were challenging the TA's were very helpful. I do wish that there would have been more TA's available at office hours because it took a long time to be helped. Overall I think this is a very helpful course, although I still can't say coming out of it how I would determine runtimes of everything.

This is the greatest class I have ever taken. I think this class is a large part of the reason why our CS department gets so much national recognition. Bloomfield has created a perfect curriculum where you literally couldn't learn more in a semester. Bloomfield is a fantastic lecturer and can effectively cover a ton of material in each lecture. The labs are all brilliantly designed to be just manageable without killing yourself, and still learn a ton about subject matter. I absolutely love this class.

Professor Bloomfield was a great professor and I enjoyed his class very much. His assignments were a pain but it did help in understanding the material. Lab submissions were annoying in that some of my files would not even submit. Other than that, great class.

2150 is basically like pledging CS. It consumes a lot of your time and was certainly a worthwhile course that I learned a lot in. I think it should be a 4 credit course because of the amount of time I spent on it however, I don't think there's really anything that could be pruned from the course because it is all so necessary. Ok maybe IBCM but other than that nothing was busy work or not worthwhile.

I picked strongly agree for all but because I meant it, also this course should be at least 4.5 credits, i learned "a shit-ton" it was fun but hard.

The course was fine overall, but it is really unfair that lab grades are not released on a timely manner-- I still don't know if I am making the same errors on each lab and thus might be losing points on several labs without being able to fix my own mistakes. Tests are a bit arbitrary too, feel kind of random with the questions they ask at times.

I loved this class, even when I was frustrated and sitting in stacks long past a decent hour (even when I left people there to go sleep). I don't believe this class should be changed much but I do think that the hash lab has too much work on the front end of the lab. Especially after spring break. I also think that the lab pages themselves should be read over again by someone who doesn't know how the labs work because for multiple labs it was very confusing to decipher what was needed for each lab. And also your TA's are the bomb. Seriously they deserve everything in the world. A short list of a few: Jay, Chris, Martin, Michelle, Leila, and everyone who had Sunday office hours. You guys deserve all things.

Very.hard.class. Although my GPA has suffered for it, I have learned lots!

This is a great course and you will come out of it knowing so much more about programming. It does require a lot of time and work, but it is very worth it.

Grading of the labs being so late was very stressful. It was impossible to know if we were doing things correctly or not. (half of the labs were not graded by the last week or so of class) The problem with grading was not the test themselves, but how the tests were graded. I often knew the answer but because I used different words than what he wanted I did really poorly. For example, sometimes I even got negative points for something that I knew but used a word he didn't like.

Just wait for the suggestions.txt

I just found `pkg-config --list-all`. I was going to rant about not having learned GTK+, but there is no stopping me, now... But, yeah, I had a blast in this course. Work load is <strikethrough>large</s> perfect. Would take again, considering next semester will be going over x64 assembly, but it otherwise wouldn't make any sense to take it again. And, yes, I realize GTK+ doesn't fit in the course objectives. Am planning to TA.

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~
	Great course with two extremely knowledgeable, caring and approachable professors (and for the most part great TAs). I learned so much and although the labs were often frustrating, I really liked the class overall. But WHY IS IT 3 CREDITS????????? This class meets three times a week for 50 minutes, has a required 1 hour 45 minute lab, and has weekly multi part lab assignments that take about 10 hours a week (some weeks more). I will never understand why this class isn't 4 credits.
	This was a great course. Sure, it was a lot of work. The most work actually I've ever had to do for one course. But I learned too much to worry about that. Bloomfield was excellent, and I feel adequately prepared for the coming CS courses.
	Question #2 above: There is absolutely no need to include non-lecture learning methods in this course - they would only detract from the class Question #3 above: This is an extremely rigorous course, as it should be. The effort required for this course should not change, but it absolutely needs to be at least 4 credits. It would actually be logical to make this the only 5 credit course in the SEAS because of the lab - the lab alone requires hands down significantly more time than any other course in the Engineering School.
	Great course! I feel that some of the extra side languages such as Doxygen and Objective C and maybe Bash scripts were unnecessary to learn as they added distraction from the course material we should be concerned about, I'll probably forget them immediately and if I ever need to know those languages I could easily relearn them just as well as I have. Makefile was helpful though.
	This class should not be 3 credits. I spend more time in this class every week than all my other classes combined. It should be 6 credits or make it two classes.
	Very open and helpful the few times that I went to office hours and learned so much in this class.
	This class really should be four credits. There's a required lab component that lasts for almost two hours, there's homework due 3 times a week, students put so much time and effort into it that it really doesn't make sense to treat it as any regular 3-credit class. Professor Bloomfield was great but seemed a little unapproachable and detached at times. I also really would have liked if the lecture had been held in a smaller classroom (I know sometimes that is not controllable) but the room was much too big for the number of students and it made it hard sometimes to pay attention and stay focused.
	There are several topics that I still feel I do not understand fully, even after going over them in class and reviewing them on my own. These topics include: calculating run-time of an algorithm, expanding upon algorithms we know, and how to approach a new data structure we haven't before seen. Questions related to these topics have come up on a number of past exams, and I have no idea where to start. I think it would be beneficial if Professor Bloomfield had spent some time going over general CS problem solving tactics. Also, some of the examples used in class (i.e. those for Dijkstra's algorithm) are repetitive - we really only need to see the first or second step. Time spent going through all of the steps for multiple problems could be better spent on the aforementioned topics.
	Not nearly as bad as rumor had it
	The labs in this class are freaking amazing. Few assignments have challenged me as much, but I am much more confident in both my knowledge of computer science and my coding ability. However, while the labs and lectures go well together, I think that there is a gap between the labs and the tests. The labs give the students a deep practical knowledge of the subject, but the tests ask very specific questions. I think the labs should include a part about the core concepts to be learned in the lab. It does not need to be anything specific, maybe a list of topics related to the lab that students should watch out for.
	The course is worthwhile overall however the tests are incredibly unfair and do not reflect understanding of material. For example, a random question about naming GDB commands used once in a tutorial does not seem to reflect ones understanding of the course's core information. The tests seem more like trivia designed to reduce the grades in the class because otherwise the averages would be too high. Basically you just study as many old tests as possible to see what weird questions could be possibly asked. It is not actually about core concepts usually.
	I learned a lot in this class. But, the amount of work required outside of class is a little bit ridiculous for 3 credits.
	Way too much work for this class. Should be at least 4 or maybe even 5 credits. Or reduce how long the labs take / reduce material.
	Great class. No suggestions to improve besides possibly better synching between sections.
	Why is this 3 credits? Please decrease amount of time for labs... I have OTHER CLASSES AS WELL! Have not done anything apart from study and do work for all my courses this semester :(
	Asking questions during the lecture can be tricky because there is not much time to respond after Bloomfield prompts for them. Also there are times when I raised my hand quickly during the prompt yet I was not noticed because I usually sit in the middle section of the auditorium.
	Great class, great professor. Only 3 credits? dude
	This was one of the most challenging courses I have ever taken and also one of my favorite. I learned so much and while Bloomfield expected a lot out of us, it pushed me to learn so much more about the course material.

The information in this document is private and confidential. Please handle accordingly.

~ QUESTIONS AND DETAILS ~	~ ANSWER MATRICES ~
	Absolutely great course, very well developed, and Bloomfield does a perfect job during lecture. I do think that this course should be worth 4 credits, simply because of how much we are expected to learn in and accomplish in this course. I, and everyone I know taking the class, spent at least 15 hours a week outside of class to finish homework (and then 3 hours in lecture and 1.75 hours in lab). I do think the amount of homework is necessary to get a grip on the material, hence my reasoning for an extra credit.. I could not ask for a better professor for this course, not to mention the exquisite TA's. I love Professor Bloomfield and 2150. I thought this was a great course and while being one of the most difficult courses I've ever taken it was also the most fun and rewarding. I think he does an amazing job with the course and I hope I get a good enough grade that I can TA for it. However, the only thing is he lectures very fast and as the concepts become more difficult to understand he becomes harder to follow. I end up just getting lost and then when he asks, "any questions?" The only thing I can think of is: can you repeat the whole thing and say it slower? Also, I really think this class should be 4 credits. It's a ridiculous amount of work for 3 credits. This class took unbelievable amounts of time. I honestly think I spent over 15 hours on average per week and probably more on harder weeks which is ridiculous for a 3 credit course. I believe this class needs to be worth more than it is. The teaching was great and the material was straight forward but it took way too much time. The material covered in this course, with a few exceptions, was extremely useful and relevant. I feel that I did learn a huge amount, but it was mostly due to the labs and independent effort. I did not feel that Bloomfields lectures were all that effective at conveying or explaining the material. I found the lecture setup made it difficult to ask questions in class and the lectures adhered to closely to the slides. The material and labs were fantastic, but the lectures and tests could be improved. This course was definitely more than a three credit class. Many times I found myself spending many more hours on the prelab or postlab than any other three credit class I've taken. In addition, this course also has a lab, which sounds like this should be a four credit class to me. Just a thought. Otherwise, I thoroughly enjoyed this class in its entirety. While I learned a lot from the course, I don't feel that it is responsible or respectful for an instructor to make his/her course require the amount of time and dedication that was necessary for many in this course to succeed. There were many times when i felt that because of this course i did not have enough time to prepare for other courses. This class should be at least 4 credits a lot of work Hard work, but it pays off! Floryan is a great guy It was lit. Grades and due dates etc. are awfully harsh. Very challenging but very useful. Definitely worthwhile and learned a lot. Bloomfield is AWESOME!!!!! Bloomfield is an awesome professor that makes one of the hardest CS classes (so far) seem very worthwhile. I learned more in this class than any other CS/engr class I've taken at UVA. Although the class itself is extremely difficult and requires a lot of time outside of lecture, the labs were always interesting (and sometimes dare I say fun) and definitely got me acclimated to using C++ in no time. I don't think that my prior courses prepared me for the workload of this class, and I think that some of the labs were way too hard because I didn't end up learning anything from them. A few more TAs would be helpful for the busy weeks. The course is a lot of work, but I learned a lot. It would be nice if we had touched on a few more things in 2110, but I think that is already being changed. It was extremely helpful that the lectures were recorded. I really appreciated the lab extension ability.