

In the winter semester of 2016, I launched a new course built from scratch: Computing for Computer Scientists. This course attempts to address the experience gap that exists across the spectrum of incoming Computer Science students. While driven by tools (shells, build systems, debuggers, version control), it explores how and why computer scientists interface with computers differently in their day-to-day activities, how to apply principles learned in courses to everyday activities, and ultimately how to be a more efficient user of computing resources.

This course has been adopted as part of the permanent curriculum at the University of Michigan as [EECS 201: Computer Science Pragmatics](#), an advised co-requisite for first-year EECS majors. For more information on the course, please visit the course homepage: <https://c4cs.github.io>

In 2017, I was awarded the [Rackham Graduate School Outstanding Graduate Student Instructor](#) and the [College of Engineering Richard & Eleanor Towner Prize for Outstanding Graduate Student Instructors](#) for this course.

I taught this course (then EECS 398) for two semesters, Winter 2016 and Fall 2016. Due to an initial enrollment+waitlist of over 400 students, the inaugural Winter 2016 offering grew to three sections (003, 004, and 005) when [Professor Marcus Darden](#) agreed to teach an additional lecture section using my materials. In Fall 2016, Marcus and I co-taught two sections of the course (002 and 003), alternating lectures, as a transition to hand the course off to Marcus permanently.

Salient Evaluation Questions (scored out of 5)

| | <u>003</u> | <u>004</u> | <u>005</u> |
|--|------------|------------|------------|
| W16 Overall, this was an excellent course | 4.15 | 4.38 | 4.50 |
| W16 Overall, the instructor was an excellent teacher | 4.80 | 4.79 | 4.81 |
| W16 I learned a great deal from this course | 4.08 | 4.41 | 4.53 |
| | <u>002</u> | <u>003</u> | |
| F16 Overall, this was an excellent course | 4.21 | 4.36 | |
| F16 Overall, the instructor was an excellent teacher | 4.77 | 4.88 | |
| F16 I learned a great deal from this course | 4.25 | 4.33 | |

Selected Quotes

- A good course! The lecturers were very engaging and friendly, which may not seem important, but really really is. A lot of times, computational skills like this have a high learning curve, but asking for help can be stigmatized. Simply put, it's hard to be a newcomer to CS. I think the lecturers did a really good job of erasing some of the barriers of learning new skills. – *Student 5, W16::005*
- Pat is super passionate about the material and really wants to help people learn. He made things that weren't really naturally interesting interesting. [...] – *Student 60, W16::005*
- This course is invaluable for students who want to be in EECS but don't have the background that independent programmers come in with. Classes like this are what enable students who feel behind to enter classes at the same level as others with more experience. I really appreciate everyone who set up this course – *Student 2, F16::003*

The remainder of this document is the unabridged evaluations.



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto, Patrick William
EECS 398 003

| | Responses from your Students** | | | | | | | | | | Other Users of This Item* | | | | | | |
|-----|--------------------------------|----|----|----|----|----|--------------|--------------|--------------|--------------|---------------------------|-----------------|--------------|------|----------------|--|--|
| | 5 | | 4 | | 3 | | 2 | | 1 | | Your Median | University Wide | | | School/College | | |
| | SA | A | N | D | SD | NA | 75% Above | 50% Above | 25% Above | 75% Above | | 50% Above | 25% Above | | | | |
| 1 | 31 | 30 | 12 | 9 | 1 | 0 | 1 | 0 | 4.15 | 4.00 | 4.33 | 4.75 | 3.95 | 4.22 | 4.52 | | |
| 2 | 47 | 17 | 0 | 1 | 1 | 2 | 4.80 | 4.25 | 4.67 | 4.88 | 4.44 | 4.75 | 4.13 | 4.44 | 4.67 | | |
| 3 | 29 | 30 | 17 | 6 | 1 | 0 | 4.08 | 4.00 | 4.44 | 4.75 | 4.05 | 4.33 | 4.05 | 4.33 | 4.56 | | |
| 4 | 60 | 18 | 5 | 0 | 0 | 0 | 4.81 | 3.63 | 4.14 | 4.63 | 3.56 | 4.14 | 3.56 | 4.14 | 4.50 | | |
| 61 | 39 | 19 | 11 | 9 | 1 | 2 | 4.47 | 4.14 | 4.38 | 4.58 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 140 | 29 | 36 | 9 | 6 | 1 | 0 | 4.18 | 3.95 | 4.31 | 4.67 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 201 | 45 | 15 | 2 | 2 | 1 | 2 | 4.78 | 4.13 | 4.58 | 4.81 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 203 | 41 | 17 | 2 | 4 | 1 | 2 | 4.71 | 4.25 | 4.63 | 4.82 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 207 | 56 | 10 | 0 | 0 | 0 | 2 | 4.91 | 4.63 | 4.83 | 4.94 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 216 | 52 | 13 | 0 | 0 | 0 | 2 | 4.88 | 4.42 | 4.70 | 4.88 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 218 | 43 | 18 | 2 | 0 | 1 | 3 | 4.76 | 4.34 | 4.67 | 4.83 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 228 | 31 | 12 | 14 | 4 | 3 | 3 | 4.42 | 4.11 | 4.50 | 4.74 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 229 | 33 | 19 | 10 | 0 | 1 | 2 | 4.55 | 4.20 | 4.62 | 4.83 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 230 | 43 | 19 | 1 | 0 | 0 | 2 | 4.77 | 4.53 | 4.80 | 4.92 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 232 | 36 | 20 | 7 | 16 | 2 | 0 | 4.28 | 4.13 | 4.46 | 4.73 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 239 | 18 | 13 | 8 | 21 | 22 | 0 | 2.40 | 4.00 | 4.33 | 4.67 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 240 | 25 | 39 | 8 | 5 | 3 | 0 | 4.12 | 4.07 | 4.33 | 4.65 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 318 | 26 | 27 | 12 | 9 | 1 | 7 | 4.07 | 4.00 | 4.25 | 4.67 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 340 | 11 | 2 | 1 | 2 | 1 | 64 | 4.73 | 3.38 | 4.00 | 4.50 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 356 | 30 | 39 | 9 | 1 | 0 | 2 | 4.26 | 4.14 | 4.44 | 4.70 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 365 | 44 | 30 | 6 | 2 | 0 | 0 | 4.57 | 4.00 | 4.33 | 4.67 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |
| 366 | 49 | 22 | 7 | 4 | 0 | 0 | 4.66 | 4.10 | 4.50 | 4.75 | 4.10 | 4.50 | 4.10 | 4.50 | 4.75 | | |

Written Comments

900 Comment on the quality of instruction in this course.

Student 1

A lot of classes was spend watching the instructors figure stuff out that they probably should have done before hand. I understand that this class is a lot of exploration but I feel like entire class periods were spent watching the lecturer figure out errors.

Student 2

Loved how lectures were setup, the live "coding" setup really helped with understanding and was much better than just lecturing on the topics.

Student 3

NA



University of Michigan
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ro.umich.edu/evals/

Winter 2016 Final
83 students responded out of the total enrolled 119

Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 003

Student 4

NA

Student 5

Quality of instruction was good for being taught the first time.

Student 6

The instruction of the course was fantastic. Pat and Darden are both really excited about what they're teaching and that always makes lectures more enjoyable. I appreciate seeing the live coding aspects (it definitely helps to know shit happens to pros as well) They're really good instructors.

Student 7

NA

Student 8

NA

Student 9

NA

Student 10

Darden is the man.

Student 11

NA

Student 12

Great

Student 13

really great

Student 14

NA

Student 15

Overall it was well taught and well-designed.

Student 16

So much work for 1 credit.

Student 17

It was fine

Student 18

Good stuff

Student 19

NA

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Instructor with Comments Report

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Instructor: Pannuto,Patrick William
EECS 398 003

Student 20

Lecture was interesting but always seemed short. I wouldn't've minded an hour and a half lecture each week

Student 21

NA

Student 22

NA

Student 23

Instructors nailed what they set out to teach.

Student 24

The instruction was great. I liked the "doing it live" kind of attitude. That way we could see that even the profs have weird issues with command line tools sometimes.

Student 25

NA

Student 26

NA

Student 27

I thought Professor Pannuto and Professor Darden were both awesome lecturers and did a great job giving us enough exposure to all of these topics in very limited class time.

Student 28

NA

Student 29

Darden is great. I love having him - he's so engaging, very funny, and (most importantly) effective.

Student 30

NA

Student 31

Some of the lectures were odd because it just consisted of the professors typing things into the terminal and it was a little difficult to follow. However, Pat's lecture on git was phenomenal.

Student 32

NA

Student 33

It was great.

Student 34

Class seemed less structured than expected. I understand this is a new course, but I would have expected a more focused less plan. I feel all this class did was show a preview to a tool I may or may not use in following classes, but doesn't make me a proficient user.

Student 35

Date Printed: 11/15/2018 16:31:15 PM



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EECS 398 003

NA

Student 36

NA

Student 37

This class is too much work for one credit. It's ridiculous the amount of effort expended on this one credit course. I am a senior and can only feel my most sincere pity for any underclassman who's taking this concurrently with intro courses such as 183, and 281. Because I'm a senior and have more exposure to the material, it was easier for me. But they must be lost and just confused. This should be considered a two credit course. I think that having advanced homework as a part of a requirement for this ONE CREDIT course is just too much. Plus, there's no way to reference things learned in this class unless you took notes from the beginning of the semester or re-watch the whole lecture. There's limited resources from the staff and the only takeaway from this was "google stuff". You need to give notes or something as a foundation. Simply watching professors perform their magic is not enough for this class' work. Please give more structure to this one credit course, or make it more than one credit.

Student 38

NA

Student 39

Professors knew the material. Live demos were actually good most of the time, but some times it prevented us from finishing on time or covering all the material.

Student 40

NA

Student 41

NA

Student 42

NA

Student 43

NA

Student 44

Instruction was always good, and lecture was both entertaining and informative even when there were some problems

Student 45

NA

Student 46

instruction was really good

Student 47

NA

Student 48

NA

Student 49

The class instructors did a great job of covering the material and being flexible to student needs, but I think that the amount of material we covered was extremely high for a 1 credit hour class.



Instructor with Comments Report

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EECS 398 003

Student 50

NA

Student 51

Great teaching, although the lectures were by far the most useless part of the course as someone with some knowledge of the material.

Student 52

Lectures seemed scattered and unfocused on times. Sometimes, the material covered in lecture seemed irrelevant/not practical (like the entire lectures spent on ed and tr). I would have preferred a couple of "tutorial" classes where we learn the basics off vim or something and then some useful tricks.

Student 53

It was hard to stay focused in lecture, since lecture was just one big live demo. I tend to learn better when there are some slides mixed in with demos (more discussion style i guess) because it outlines and guides the lecture. I think if you made some slides and switched between explanations of the slides and demoing code, it would've been easier to stay focused.

Student 54

The TAs didn't really seem to know what was going on and were not familiar with the assignments. Some of them even disagreed with Pat on what should be taught but Pat apparently thinks his way is the right way so....

Student 55

Good set of material but the unpreparedness of lectures made it difficult to gain much from lectures themselves. Felt more like learning from the homework alone

Student 56

In the beginning of the term, the content in lecture did not match the content of the homework, which was very frustrating. This class was more work than it should have been for only 1 credit (especially in the beginning of the semester).

Student 57

A lot of the times lectures were cut short and we didn't cover things that would be helpful for the homework

Student 58

Pat and Darden were the bomb

Student 59

I liked the way lectures were taught/structured but it was sometimes difficult to follow along. Some topics we were expected to already know about (for example: making a list of words at the beginning of class when we were learning about that topic during that class).

Student 60

NA

Student 61

The lecturers were great speakers, in addition to being knowledgeable, kind, and understanding. A lot of it also felt like programming trivia. For example, it was interesting to see sed's interface, but having us practice using it seemed pointless. Lecture topic order seemed random. Also, it would have been nice to cover proper automated testing.

Student 62

NA

Student 63

This was a good course. We had a lot of problems with the Apple Air during lecture. The display would cut off and it was distracting. Professor Darden knew what he was doing, though it might have helped if he rehearsed it beforehand.



Instructor with Comments Report

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Student 64

Instruction quality was adequate for the course. There wasn't much time in lecture, so maybe the instructors could have been more prepared each week. However, I thought the instructors still did a good job.

Student 65

NA

Student 66

Some lectures were tight, others were more haphazard. It's hard to only do an hour a week, so I would often forget most of the material from the previous weeks. The quizzes helped with that though. The live coding/working is interesting and I can't think of a better way to present the material, except to add more graphical representations like the git workflow lecture. That picture really helped me.

I appreciate that this is a later, Friday afternoon class, however, the course staff at times broke the boundaries of professional behavior, with negative effects to the course instruction as a whole. Specifically, the facebook messenger group was distracting. I also do wonder why, for one of the largest course staffs in the department, there were not women represented. I understand that there aren't many women in the department in general, and that this is a problem in the field, but it seems counterproductive to represent the people with knowledge as only men.

Student 67

Great team!

Student 68

NA

Student 69

Lectures were interesting but sometimes hard to follow. Everyone was very helpful + knowledgeable during office hours.

Student 70

Instructors tried their best to teach students. Sometimes, lectures seemed disorganized as we didn't really finish the demos we needed to for the week or class just sort of ended before what was trying to be shown was finished.

Student 71

NA

Student 72

Really fun and interesting lectures

Student 73

NA

Student 74

Instruction seemed pretty random at times and it felt like the different lectures were getting different materials. I could tell that the instructor (Pat) knew a ton and was very passionate and wanted to teach us all that he knew but I don't think he did the best job in portraying that information to us. I felt that instruction was too random and wishy-washy at times and other times it was great but I think as the course progresses this will be figured out.

I think having outlines to fill in as we go along in class or lecture slides or something would help students follow along during lecture.

Student 75

NA

Student 76

NA



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EECS 398 003

Student 77

NA

Student 78

NA

Student 79

NA

Student 80

I thought the quality of lectures and instruction in this course was decent. The off-of-the-cuff demo style felt organic and true to how metacognition works and how these topics should be learned. However, sometimes they felt a bit too unscripted and not practiced - with weird tangents and side issues.

Student 81

The instructors clearly knew the topics very well for this course, which was very useful for times when students had questions about content. This being said, much of what was shown in lecture did not start from square 1, making it very difficult for a beginner like me to even have questions to ask. Keyboard shortcuts were used but not explained and background knowledge was assumed to the point of making lectures difficult to follow. I appreciated the instructors' openness to questions, and I realize that it is difficult to be clear but not boring to all difficulty levels in such a class, but as the course was described to me as having a target audience of 280/281 students, I don't think that material from 281 or only briefly touched on in courses prior to this should be assumed knowledge unless the course description is altered

Student 82

NA

Student 83

Professors were all knowledgeable of the subject matter and tried their best to teach it.

Written Comments

911 Please comment on the quality of the course as a whole.

Student 1

This course was WAY too much work for one credit. As a person who came in with little to no previous experience (which I believed was the intended audience) and I would spend over 5 hours a week if I wanted to complete the homework successfully. This course was way too hard for a 1 credit class.

Student 2

Overall, the course does a great job of covering a wide breadth of CS topics and introducing students to them. The class is definitely much more useful earlier rather than later in the EECS program.

Student 3

I truly loved the patience that Pat and Darden had throughout this course. It's obvious you put a lot of thought into the logistics of the course so as to benefit the students through a positive learning environment that is rarely seen throughout the rest of EECS. keep it up

Student 4

NA

Student 5

The topics taught in the course are good. There should be more time spent on command line topics, not just 2 weeks.

Student 6

The class was a lot more work than I had planned on, it was definitely helpful to gain experience in some of these topics but I wasn't planning on spending many hours on assignments which often ended up being what



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happened.

Student 7
NA

Student 8
NA

Student 9
NA

Student 10
Good material that covers a wide breadth of computing tools that aren't taught in other classes.

Student 11
NA

Student 12
Great, very relaxed

Student 13
really great, super flexible, willing to hear feedback. keep this up and you will zone in on an incredibly useful class fast. already great though

Student 14
NA

Student 15
Really well-designed curriculum.

Student 16
It was a good course although I felt like the entire course was, "can you google this?"

Student 17
NA

Student 18
Even better stuff

Student 19
Obviously in the first semester there are going to be a few bumps for the course. Overall I think the course did a good job of introducing topics, though it may be a little more useful to cover fewer topics but go more in depth on each topic (i.e. 2 weeks per topic not 1).

Student 20
NA

Student 21
There is WAY too much work for a one credit course, and weeks where I had to spend more time on assignments in this class than four credit upper level EECS classes. It's awesome, useful material most of the time, but the homework needs to be scaled back.



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Student 22
NA

Student 23
Great course, learned a ton,

Student 24
I believe there are too many topics that you're trying to cover at once and it was a little all over the place. I would prefer spending 2 or 3 weeks each on fewer topics. I know we did two weeks of git (which is a good idea), but it would have been more logical to have them back to back so it flowed together like a cohesive unit.

Student 25
NA

Student 26
NA

Student 27
I thought the course was remarkably well designed considering this was one of the first times it has been taught. My biggest complaint is that I felt that a few of the lectures (e.g. the editors lecture) focused a little bit too much on history and not as much as I would like on relevant features of modern tools.

Student 28
NA

Student 29
*This was a lot of work - I took it pass/fail and was still unsure of whether or not I'd pass. Ideally, homework assignments will be easier and the challenge homework will be more akin to current homework assignments. You can consider requiring more than 3 challenge homeworks from students in order to make up for this somewhat lighter work load.
My other suggestion is to have optional discussion sections/homework tutorials. If you have those, then it might make more sense to keep the difficulty level of the homework where it currently is. I find discussion really useful and often times getting started on the homework is the hardest part.*

Student 30
NA

Student 31
NA

Student 32
NA

Student 33
NA

Student 34
I think that the instructors were very knowledgeable but could have planned the lessons together. It seemed one instructor did things in a way the other instructor didn't find suitable. This undermines the knowledge and authority of the other instructor.

Student 35
NA



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Winter 2016 Final
83 students responded out of the total enrolled 119

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Student 36
NA

Student 37
This was a good course in terms of learning useful material

Student 38
NA

Student 39
Good material Super helpful for young undergrads. Keep teaching it

Student 40
NA

Student 41
NA

Student 42
NA

Student 43
NA

Student 44
Very good, but should be worth more credits because of the workload

Student 45
NA

Student 46
course was way too much work for 1 credit

Student 47
Great course overall, should def be a 2 credit class

Student 48
I was expecting more of a tutorial than a "figure it out yourself" kind of thing. The class kind of taught me how to google things, but the whole reason why i was taking the class in the first place was to actually learn these things instead of blindly searching google on how to debug with galb, etc.

Student 49
*- We go too quickly through topics; I wish we spent 2 weeks per topic
- Homeworks are very time consuming (the normal hw takes me 4 - 6 hours every week)
- I don't feel like this class is as helpful as I hoped it would be; I think in part because we go through topics so quickly.
- I almost think it would be better to focus more on terms and programs rather than working through a bunch of tutorials (like ed)
- This is the hardest and most work I have ever done for a 1 credit hour class (and I am senior who has taken 4 other 1 credit hour classes)
- having homeworks, advanced homeworks, AND an exam for this class is wataay too much for 1 credit hour -- pick AT MOST 2*



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Student 50

NA

Student 51

I thought the course would be incredibly useful for a student in 280. As a senior, i still got some out of the class, mostly in the form of the Advanced homeworks which i thought were easily the best part of the class and really made it worth taking. Instead of making the class easier, i think it would be better to make it 2 credits and make more advanced homeworks necessary.

Student 52

I didn't get as much out of the course as I had hoped. Though I did get exposure to a lot of new tools, I don't feel like I know how to use any of them well, and would have had a similar learning experience if I had just been handed a list of tools and a short description of them at the beginning of the semester. I did learn a couple of cool tricks from looking at the solutions to the homeworks after-the-fact though. Actually doing the homework, I often did hacky things no one should ever do in real life.

Student 53

So at the beginning of the semester, the workload was way too high and there was not enough instruction in the homeworks. I think that ended up being addressed well in the following homeworks, which didn't take me too long to do.

Student 54

This is a really bad course. It seems like it would be useful, but really isn't. First of all, the assignments do a bad job of reinforcing the concepts. They seem thrown together hastily and some of them require a specific solution that isn't even the best solution for the problem. They should be more open ended instead of fill in the blank. Secondly, there is a lot of information that is completely redundant like git, which has been taught in every eeecs class. So why rehash it in 398. It was very boring. Also, no one cares about changing the colors of their text editors and not everyone uses vim/emacs so that was useless. Especially the emacs part.

Student 55

Fun course, fun lectures. Again some problems in how lecture was structured and prepared for.

Student 56

I feel like I didn't learn anything useful in this course. Instead it made me an expert on using stupid out-dated tools from the 80's like SED.

The somewhat useful tools we were taught like GPROF and GDB still aren't that useful because those tasks are usually done in IDE's now a days, not in obnoxious bash interfaces.

Student 57

NA

Student 58

Really cool course, I wish it could be 2 credits worth and 2 hours a week. I felt that 1 hour a week was only enough to barely scratch the surface of alot of the material.

Student 59

This course expected students to have more background than the course description and course title stated. It was too much work for a one credit course- I spent more time on this homework than on homework for other 3 or 4 credit courses. Part of this was because I didn't have any background knowledge in the topics we covered so I had to do a lot of work to catch up and learn. Either it needs to be advertised for students at higher levels in CS or it needs to be taught at the more beginner level. I took EECS 281 this semester and found this course to be above my level.

Student 60

NA

Student 61

I enjoyed the class, but felt disappointed by it. It was a nice gesture to be asked, "what would you like to learn?" but this seemed to show a lack of curriculum organization. I believe it would be more productive to have the sections divided into separate classes which focused on specific topics. For example, one could focus on version control while another focused on shell scripts.



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Student 62

NA

Student 63

Overall, this course was a 6/10. We did not receive enough preparation for some of the homework assignments (like the Python Scripting and the bash scripting). Some aspects seemed useless, like learning about certain types of editors (vim and emacs are ok, but sed and ed???) and about your environment (how useful will that be in other EECS classes?).

Student 64

This course would have been very useful if I had taken it as a sophomore. It covered a lot of things that were useful in terms of programming.

Student 65

This could be changed to a 2 or 3 credit course if the exam was harder

Student 66

Good course. As expected for a new course, there were some rough edges. I think some homework assignments could be honed and improved, although overall, they provided good accompaniments to the lecture material. I think it's important to note that there are things that are cool and things that students need to know, and in an one credit class, you don't have the luxury of spending too much time on the former. The advanced homeworks especially seemed to stray into this area, with tasks like the cross compiler. I would have preferred much more to see the advanced homeworks like the later ones where we automated something with a script or used a new tool. That's really useful information, and if someone does one script and one tool, they'll get the gist of it and be able to extend that beyond the class.

Student 67

Fantastic class. Wish I was in a more stable version of the class, but it was nonetheless fantastic!

Student 68

NA

Student 69

This class was enjoyable and educational, and a good introduction to a lot of things I probably should've known how to do 3 years ago.

Student 70

Assignments are well thought out and graded fairly. I liked using gradescope as our feedback system and the feedback was fairly detailed.

Student 71

Too much work for a one-credit. This should have been a three credit course.

Student 72

Kind of a lot of work considering the course is only one credit

Student 73

NA

Student 74

I thought that the course would be more interactive - it is clear the instructors know a great deal about the material but I felt that they did not properly feed us that knowledge. I understand that the course is about figuring out stuff at times but I think a little more instruction would be helpful in teaching us the really important stuff. It would've been beneficial to me to have like a tutorial/walk through kind of thing in lecture where we work with groups on like a "class problem" and the lecturers frame it to make us try things but also go over why some things work and don't. Then on the HW to make it more in depth. This would've been good guidance and make me feel like I learned more. I think interactive sessions would be beneficial. I also think going over things like advanced homeworks in class would be beneficial for us to just watch and see how an instructor works and figures things out.

Student 75



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EECS 398 003

One of the best courses so far. Highly recommended. Light workload, but I really learned a lot. Instructors were knowledgeable and helpful.

Student 76
NA

Student 77
NA

Student 78
NA

Student 79
NA

Student 80
I think this course was very well taught, especially for the quick gestation period. The assignments were very useful at encouraging me to dig deep into various tools, and try to develop my metacognition skills.

Student 81
I think that this course is very well-intentioned. It is a great idea to try to fill in the gaps from other courses and expand on computer science in a one-credit, interest-based class. I was really excited to take it! This being said, I was somewhat disappointed with the way that this concept was actualized. The course load was far greater than a 1-credit course - I spent hours on every homework assignment and was still unable to complete some. The advanced homework requirement was not realistic for students without a strong computer science background (which was not required for this course), as I attempted over half of the assignments and was only able to fully complete 2 within the time limit provided, even taking the spring break extension into account. Lectures were very difficult to follow and not necessarily geared toward students who were just beginning their computer science career. For instance, I am at the 280/281 level but do not know much outside of what has been taught in UM EECS courses. I took this course as an opportunity to learn these extra things, but found that they were already assumed to be known by this course. For the git lecture, an intro git tutorial was assigned as homework while the lecture preceding this assignment demonstrated less simplistic aspects that assumed knowledge from the tutorial. In the IDEs lecture, the students were asked to provide all of the features of IDEs - a good idea to learn from one another, but a bewildering experience for someone who knows very little about IDEs and was expected to take part in teaching a lesson in which concepts were named but not really described. I think that offering a course for students of such a wide variety of experience levels is ambitious, but with no prerequisites listed on the course guide I think that it is expected that this course will teach to the lowest possible level enrolled. It is perfectly fine to teach this course at a higher level, but if this is the aim I would not recommend speaking to 280 classes about taking it and advertising it as being open and accessible to students who do not already have a beginning understanding of these topics. I think that this course will develop well over time, but assignments were not always well thought-out (for instance, many IAs were great at working with students during office hours but at times assignment questions were not clear or answer keys not created, making things difficult for them). Overall, taking this course was a very stressful experience that was not as rewarding as I expected, as I felt that much of the work involved tedious and extensive googling rather than useful in-class learning that fully utilized the experience and vast knowledge of the instructor's and IA staff. Recommendations for the future of this course, to be taken separately or in some combination: (1) 2 credits (2) Advisory prerequisites (3) Advanced homework as extra credit, or lessen the number required (4) Shorten homework assignments (5) 1.5 hour lectures to allow for focus on giving basics before jumping into advanced aspects of topics (6) Do not assume prior or concurrent enrollment in any (or any particular) EECS courses (7) If there is not time to cover both intro and more interesting aspects of a particular topic, assign a tutorial to that concept in the previous week's homework to ensure background knowledge coming in

Student 82
NA

Student 83
I would have to say sub-par - I'll go into this in 16.

Written Comments

931 Please give any other comments on this course as a whole.

Student 1

When trying to re-watch lecture slides it was hard to read the computer screen, maybe record a screen recording as well as the recordings.

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Winter 2016 Final
83 students responded out of the total enrolled 119

Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 003

Student 2
NA

Student 3
NA

Student 4
I think this course was definitely a lot of work for a 1 credit. Additionally, I think personally I would have benefitted more if we had done fewer topics over the same spread of time.

Student 5
This course should be a 2-credit course instead of 1 credit. The homeworks also need tweaking, but this will come with time. The instructors told students that the amount of studying needed was minimal, which wasn't very true.

Student 6
NA

Student 7
NA

Student 8
NA

Student 9
NA

Student 10
Offer is again!

Student 11
This course introduced me to a lot of new useful tools that I think will genuinely improve my productivity!

Student 12
Great, should make a requirement

Student 13
keep on keeping on

Student 14
NA

Student 15
Homework assignments could have taken less time and caused fewer nervous breakdowns and panic attacks.

Student 16
NA

Student 17

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Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

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EECS 398 003

Probably up the work a bit and make it a 2 credit course

Student 18
NA

Student 19
NA

Student 20

The first part had homeworks that took too long for the amount of credit received. The stuff learned from these assignments was still very useful though. I think in the future instructors should consider a 2-credit version of the course to be able to delve a bit more deeply into some of these topics, especially if this course is intended for people with only a couple of semesters of programming experience.

Student 21

I personally feel like advanced homeworks should be open the entire semester due to how long they take to complete. I also feel like this would result in me having learned more. I was not going to go back to week X to do an advanced homework because of time commitment, but if it was the most interesting to me and it had been open I definitely would have!

Student 22
NA

Student 23

Make it either more credit or less work. too much work for only one credit. more office hours/TAs. make this a mandatory course. Not as much live coding (iffy in lecture)

Student 24

This class was really time consuming. Especially when you consider that it's designed for 280/281 level students and a lot of the actual students were juniors and seniors. The weekly homeworks were supposed to take us about an hour each week. I easily spend 3-4 hours on each weekly homework. Then the advanced homeworks would be another 3 or so hours. Quite honestly, I had to allocate way more time to this one credit course than my 3 credit IOE 366 class.

Student 25
NA

Student 26
NA

Student 27
NA

Student 28

Really enjoyed the class. Made the command line less intimidating. Would have probably continued to stay away from the command line, but will try using it more and more. I wish I could have taken this class earlier in my college career. I did mostly everything in Windows, so it was nice to see and appreciate how the other side does it.

Student 29

*It sucks that there were no women TAs. Actually, I was kind of disappointed in course staff in general. Since this is the first time this course was offered, the only people that would make suitable TA's are the people who would go out of their way to learn this "hacker" stuff. These are the people who are "look" like hackers and expert coders - men. Not only that, but there is an unfortunate correlation between being skilled at things like vim, unix, bash, github and being a stereotypical computer science asshole (i.e. having the attitude that you are a gift to the world because you know how to code...actually, scratch that...because you are simply *pursuing a degree* in computer science - neither implies the other). There's actually a name for this that gets thrown around the CS department - it's the "David Snider" attitude. Anyways, my point is that I get that it's hard to find people who are qualified to teach this course. And not *all* of the TA's for this course were *always* terrible. That being said, anyone can learn/teach this material, but not everyone is (as) capable of creating a welcome, engaging learning environment. Hopefully the set of people who took this course will provide a source of better TA's for next semester.*



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Instructor: Pannuto,Patrick William

EECS 398 003

Student 30

NA

Student 31

WAY too much work for a 1 credit course. While I ended up learning a lot, I spent hours upon hours doing the homework each week and struggled greatly.

Student 32

NA

Student 33

I feel like the work load was too much for a 1 credit course.

Student 34

The amount of work in this class was far, far more than expected. I also feel it was unfair to call this a one credit hour course with the amount of work I had to do to get the assignments done.

Student 35

NA

Student 36

NA

Student 37

Staff are fine: helpful and prompt with responses. But this course was just disorganized.

Student 38

NA

Student 39

Too much work for 1 credit. Make it 2 next time

Student 40

to much workload for 1 credit

Student 41

NA

Student 42

NA

Student 43

NA

Student 44

NA

Student 45

NA



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 003

Student 46

NA

Student 47

NA

Student 48

I think the workload was too much for a 1 credit course. Sometimes the homeworks were okay, and other times they were incredibly difficult. I only attempted 1 advanced homework because I would often try to figure it out, make no progress after 3 hours, and then give up. It just seemed like the advanced homework (especially when you also had to do the regular homework) was a lot of work for a 1 credit class (especially for someone who has literally no experience with any of the tools we learned about).

Student 49

NA

Student 50

The topic and lecture materials needs to be better organized.

Student 51

Really has a lot of potential, Pat, you did great!

Student 52

Between advanced homeworks and a couple of the normal homeworks being as difficult as advanced homework, the course definitely felt more like two credits than one. I think handouts that go along with each lecture (given out before or put online after) would be super useful. Just to summarize the most useful commands we learn each lecture/what they do and give us something we can reference back to in the future, even after the course is over. It also happens that if you miss a minute of lecture and look back up, you have no way of knowing what you missed (and if it was relevant) without hunting through a 50 minute video.

It's also somewhat counterintuitive to have a course that is all about using the internet and resources to find answers and then having a closed book exam. Though I don't think the exam was very difficult, it was very confusing what exactly to study beforehand and seemed dissonant with the theme of the course.

Random one-off, but the question on the hw10 and the exam about what created gmon.out was answered vaguely (and probably incorrectly) in the hw10 solution, since "compiling with the -pg flag" implies the compiler creates it.

Student 53

Thank you for being so responsive to student feedback over the semester. I found that when I and other students were frustrated with something in the course, we could tell you and you'd address it. One thing I wanted to mention was that the workload was DEFINITELY NOT a 1 credit workload. I understand that you were hoping for a 1 hr of lecture + 2-3 hours of homework per week thing, but I think that's more idealistic than realistic. The reality is that many college students (myself included) pick 1 credit classes as a way to have an interesting class to balance out harder classes, and do not want to put in lots of effort for it. I understand that to actually learn these tools you need to practice, which is why there were weekly homeworks. If you want to keep these homeworks, I think you could make this a 2 or 3 credit class that meets 2 or 3 times a week and keep the same homework load. This would allow students to see the material more than once per week (because there would be more lectures) while still getting the practice from homework. But keeping it at 1 credit with this workload is DEFINITELY too much. I've taken a lot of 2 credit courses at this university and all of them have had less work than this class. If you can balance out this class, I think it will be very valuable for students down the road. Thanks for trying it out this term!

Student 54

Overall it was a complete waste of time and a shit show. 10/10 would not take again.

Student 55

Keep at it, I know the course is newer but the material is so valuable for all developers to learn and learn how to learn

Student 56

Python programming seemed practically useful.



Instructor with Comments Report

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Instructor: Pannuto,Patrick William

EECS 398 003

Learning how to use one of the heavy IDE's like Visual Studio would have been useful (the HW we did on IDE's was so unguided that it doesn't count). And I don't mean anything super fancy. Like, just how to go about the basics, like setting up a project, adding dependencies, building, etc. would have been nice.

| | |
|------------|---|
| Student 57 | NA |
| Student 58 | <i>For a course learning just the essentials, it assumed a lot of knowledge. Homeworks were cool, if more time consuming for a 1 credit course. I would use the homeworks to pick one tool a week and really learn how to use it.</i> |
| Student 59 | NA |
| Student 60 | NA |
| Student 61 | <i>I wasn't a fan of how homeworks were graded. My responses received widely varying marks, which seemed to show a lack of a rubric/set of guidelines. Although some of the feedback was helpful, a lot of the comments were things like "guess was eh-0.5," which is something a professor or GSI would NEVER write. Instances like these are what make me feel uncomfortable in classes with undergraduate student graders.</i> |
| Student 62 | NA |
| Student 63 | <i>I don't think that 1 credit is enough to learning anything substantial in the course. 2 credits would give us a deeper understanding of the topics. Topics like scripting required more time since (in my opinion) it is the most useful thing to learn in class like this. It can be used to automate testing of projects.</i> |
| Student 64 | <i>Some of the homework assignments felt like they took too long.</i> |
| Student 65 | NA |
| Student 66 | <i>Really great concept for a course. I think it serves an under developed element of the computer science curriculum. Could use some polishing, honing, etc, but after another iteration or two, I think it will be really great.</i> |
| Student 67 | NA |
| Student 68 | NA |
| Student 69 | <i>I did feel that the workload varied widely based on past experience. I probably spent 5hrs/week on this class, which was more than I was anticipating. I also wish I'd thought to take it pass-fail.</i> |
| Student 70 | <i>Please just spend more time preparing for the lectures so that there are less technical issues during the presentations.</i> |



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto, Patrick William

EECS 398 003

Student 71
NA

Student 72
NA

Student 73
NA

Student 74
Good idea for a course, poor execution first time around. I'm really hoping it gets better as the younger students start taking it.

Student 75
NA

Student 76
NA

Student 77
NA

Student 78
NA

Student 79
NA

Student 80
I've heard a lot of people talk about how hard the workload for the course was. As someone with a bit of experience I think it was on the heavier end for a 1-credit class, but probably appropriate.

Student 81
NA

Student 82
NA

Student 83
This course became a huge source of stress throughout the semester for me. The work for any individual assignment was not consistent at all and, in general, even the assignments on the low end for work still were not short (this means the long assignments were LONGGGGGGG). I think something that would make this much less stressful is very clear and concise directions with links to PERFECT examples. For a 1 credit class I think it's completely unreasonable to assign such a breadth of topics and give students little to no examples. I don't think it's sufficient to tell them "hey just google this it's easy after that". For a class that aims to teach people how to do things, I think the examples should be concrete and given to us - if the reasoning against this is that you can just simply google the information - I can't understand it at all. A lot of students (and definitely the aimed at type of person that should take this class) isn't proficient in all or any of these things. (Sort of lost where I was because this bar is so small, but anyway) For a 1 credit class I feel it should be perfectly reasonable to tell people explicitly how to do some of the more difficult things as opposed to making them go on a scavenger hunt to find all the pieces to complete any given assignment. That being said though, the professors really were helpful for what we had to work with. My feelings on this class have been very mixed throughout and now at the end.

Written Comments

1098 Among the courses you have already taken, which proved the most (or least) effective in preparing you for this course, and why?



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Instructor: Pannuto, Patrick William
EECS 398 003

Student 1
EECS280

Student 2

There wasn't any courses really needed to prepare you for this case besides Engineering 101/EECS 183 for a basic understanding of development.

Student 3
NA

Student 4
NA

Student 5
N/A

Student 6

Having taken 281, I see a lot of places where I would have liked to apply knowledge or topics from this course to make my life a bit easier in that class. I think the only requirements for this class really are being familiar with some terminology and understanding why you would want to use things shown in this class.

Student 7
NA

Student 8
EECS 280

Student 9
NA

Student 10
n/a

Student 11
NA

Student 12
CS undergrad would have been better if I took as a freshman

Student 13
280,281,482,445

Student 14
NA

Student 15
NA

Student 16

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Instructor with Comments Report

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EECS 398 003

NA

Student 17

Just knowing how to code in general,you slowly become accustomed to some of the things they covered, so all upper level EECS classes prepare you pretty well.

Student 18

I mean basic programming of 101 and 280 helped but not more than that

Student 19

NA

Student 20

280 and 281. they briefly introduced me to some of the things covered in this class, so I was aware of their existence but didn't really know how to use them.

Student 21

None - I took this concurrently with 281 and 370 and did not feel adequately prepared for the level of course material.

Student 22

NA

Student 23

idk 101, 280? a decent knowledge of programming is needed.

Student 24

NA

Student 25

NA

Student 26

NA

Student 27

NA

Student 28

NA

Student 29

Either 281 or 485 because I was either using some of the technologies discussed or these courses illustrated the utility behind these tools.

Student 30

NA

Student 31

NA

Student 32

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EECS 398 003

NA

Student 33

NA

Student 34

I felt I was supposed to know most everything already in which I did not.

Student 35

NA

Student 36

NA

Student 37

NA

Student 38

NA

Student 39

EECS 482 and EECS 485. Both had me using git and the command line a lot

Student 40

NA

Student 41

NA

Student 42

NA

Student 43

NA

Student 44

EECS 280 and 281 gave me familiarity with the tools available, and this class taught me how to use them more efficiently

Student 45

NA

Student 46

NA

Student 47

Least effective: 280,281

Most effective: 485



Instructor with Comments Report

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Instructor: Pannuto,Patrick William

EECS 398 003

Student 48

NA

Student 49

EECS 485 proved to be the most effective in preparing me for this course because in 485 we use Git, pip, and python. I think this class would be super helpful for students to take before taking 485 though since 485 has a steep learning curve.

Student 50

NA

Student 51

MOST: EECS 482

Student 52

EECS 482 (for gdb/git), EECS 485 (for python/git), both taken concurrently

Student 53

I don't think many classes helped prepare me for this class (since we didn't really cover in depth command line stuff) which is why I chose to take the class. That being said, when I first heard about this class I thought it'd be a beginner guide to command line stuff, but once the class started, it wasn't quite that. Defining the goals and audience of this course - is it for people right out of 183/280 who will have had little to no command line experience or for more senior students who are pretty comfy with the terminal? If it's the former, then it will be important to structure lecture and homeworks as tutorials that teach the basics in a practical way rather than intermediate/advanced techniques in a 'heres some fun info for ya' way. I think the first few lectures were closer to the latter, but the later lectures catered more towards the former.

Student 54

You don't even have to be an eeecs major to take this. Nothing was useful and everything was trivial.

Student 55

how to google 101? Possibly 388 for setting up VM and dealing with that. 100 for linux command line stuff

Student 56

EECS 280, it is almost a requirement. It probably should be an actual requirement.

Student 57

281 because I had to google and use stackoverflow a lot for that class

Student 58

281, just knowing makefiles/tools

Student 59

NA

Student 60

NA

Student 61

internships

Student 62

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EECS 398 003
NA

Student 63

EECS 280 was enough to take this course, though I don't think taking it concurrently would be a good idea.

Student 64

Since this course covered so many different topics, there are a bunch that helped me with the topics of GDB and Valgrind, while SI 106 helped me with python scripting.

Student 65

NA

Student 66

Mostly outside knowledge and tinkering with computers. Some classes have used version control and Unix, but for the most part material was accessible to a novice.

Student 67

EECS 280

Student 68

NA

Student 69

None of them really prepared me at all

Student 70

EECS 281. Helped with the programming as well as some of the tools that we used in this class.

Student 71

NA

Student 72

NA

Student 73

NA

Student 74

--

Student 75

NA

Student 76

NA

Student 77

NA



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Instructor: Pannuto,Patrick William

EECS 398 003

Student 78

NA

Student 79

NA

Student 80

EECS 281 had a couple of labs (e.g. on profiling) that proved helpful for this course.

Student 81

UM EECS courses in general were the most effective in preparing me for this course; however, I do not think that taking 183/203/280 prior to this course was adequate preparation

Student 82

NA

Student 83

Any and all EECS classes.

* The quartiles are calculated from Winter 2016 data. The university-wide quartiles are based on all UM classes in which an item was used. The school/college quartiles in this report are based on upper division classes with an enrollment of 75 to 9999 students in College of Engineering.

*** SA - Strongly Agree, A - Agree, N - Neutral, D - Disagree, SD - Strongly Disagree, NA - Not Applicable.



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 004

| | Responses from your Students** | | | | | | | | | | Your Median | | | | Other Users of This Item* | | | | | | |
|-----|--------------------------------|----|----|----|----|----|------|------|------|------|-------------|-------|------|-----------------|---------------------------|----------------|-------|-----|-------|-----|-------|
| | 5 | | 4 | | 3 | | 2 | | 1 | | NA | Above | 75% | University Wide | | School/College | | | | | |
| | SA | A | N | D | SD | 1 | 0 | 0 | 0 | 0 | | | | 0 | Above | 50% | Above | 75% | Above | 50% | Above |
| 1 | 33 | 24 | 9 | 5 | 1 | 1 | 0 | 0 | 4.38 | 4.00 | 4.33 | 4.75 | 3.95 | 4.22 | 4.52 | | | | | | |
| 2 | 49 | 14 | 5 | 1 | 1 | 0 | 0 | 4.79 | 4.25 | 4.67 | 4.88 | 4.13 | 4.44 | 4.67 | 4.56 | | | | | | |
| 3 | 34 | 22 | 10 | 4 | 2 | 0 | 0 | 4.41 | 4.00 | 4.44 | 4.75 | 4.05 | 4.33 | 4.56 | 4.50 | | | | | | |
| 4 | 44 | 23 | 5 | 0 | 0 | 0 | 0 | 4.68 | 3.63 | 4.14 | 4.63 | 3.56 | 4.14 | 4.50 | 4.50 | | | | | | |
| 61 | 31 | 15 | 11 | 8 | 2 | 4 | 4.33 | 4.14 | 4.38 | 4.58 | | | | | | | | | | | |
| 140 | 34 | 22 | 12 | 3 | 1 | 0 | 4.41 | 3.95 | 4.31 | 4.67 | | | | | | | | | | | |
| 201 | 45 | 17 | 3 | 5 | 0 | 0 | 4.72 | 4.13 | 4.58 | 4.81 | | | | | | | | | | | |
| 203 | 44 | 18 | 1 | 5 | 2 | 0 | 4.70 | 4.25 | 4.63 | 4.82 | | | | | | | | | | | |
| 207 | 57 | 12 | 1 | 0 | 0 | 0 | 4.89 | 4.63 | 4.83 | 4.94 | | | | | | | | | | | |
| 216 | 54 | 13 | 3 | 0 | 0 | 0 | 4.85 | 4.42 | 4.70 | 4.88 | | | | | | | | | | | |
| 218 | 49 | 14 | 4 | 1 | 0 | 2 | 4.81 | 4.34 | 4.67 | 4.83 | | | | | | | | | | | |
| 228 | 33 | 14 | 7 | 14 | 1 | 1 | 4.39 | 4.11 | 4.50 | 4.74 | | | | | | | | | | | |
| 229 | 36 | 21 | 6 | 7 | 0 | 0 | 4.53 | 4.20 | 4.62 | 4.83 | | | | | | | | | | | |
| 230 | 45 | 19 | 4 | 2 | 0 | 0 | 4.72 | 4.53 | 4.80 | 4.92 | | | | | | | | | | | |
| 232 | 38 | 16 | 7 | 8 | 3 | 0 | 4.55 | 4.13 | 4.46 | 4.73 | | | | | | | | | | | |
| 239 | 18 | 10 | 13 | 14 | 17 | 0 | 2.88 | 4.00 | 4.33 | 4.67 | | | | | | | | | | | |
| 240 | 24 | 26 | 14 | 7 | 0 | 0 | 4.06 | 4.07 | 4.33 | 4.65 | | | | | | | | | | | |
| 318 | 25 | 26 | 10 | 2 | 2 | 7 | 4.21 | 4.00 | 4.25 | 4.67 | | | | | | | | | | | |
| 340 | 11 | 2 | 7 | 2 | 1 | 49 | 4.25 | 3.38 | 4.00 | 4.50 | | | | | | | | | | | |
| 356 | 33 | 31 | 6 | 1 | 0 | 1 | 4.42 | 4.14 | 4.44 | 4.70 | | | | | | | | | | | |
| 365 | 42 | 21 | 8 | 1 | 0 | 0 | 4.64 | 4.00 | 4.33 | 4.67 | | | | | | | | | | | |
| 366 | 45 | 23 | 3 | 1 | 0 | 0 | 4.70 | 4.10 | 4.50 | 4.75 | | | | | | | | | | | |
| 11 | 50 | 14 | 5 | 0 | 1 | 0 | 4.80 | 4.50 | 4.79 | 4.83 | | | | | | | | | | | |
| 23 | 29 | 29 | 8 | 3 | 1 | 1 | 4.29 | 4.07 | 4.28 | 4.59 | | | | | | | | | | | |
| 38 | 16 | 7 | 10 | 6 | 1 | 30 | 3.93 | n/a | n/a | n/a | | | | | | | | | | | |
| 60 | 30 | 26 | 9 | 6 | 0 | 0 | 4.29 | 4.25 | 4.50 | 4.83 | | | | | | | | | | | |
| 174 | 28 | 20 | 13 | 5 | 2 | 2 | 4.20 | 4.12 | 4.53 | 4.81 | | | | | | | | | | | |
| 369 | 32 | 28 | 6 | 4 | 0 | 1 | 4.39 | 4.21 | 4.50 | 4.67 | | | | | | | | | | | |
| 222 | 19 | 13 | 21 | 9 | 1 | 7 | 3.54 | 3.50 | 4.13 | 4.50 | | | | | | | | | | | |

Written Comments

900 Comment on the quality of instruction in this course.

Student 1

This course is excellent. I learned a lot from this course. Would definitely recommend my friends taking.



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 004

Student 2

Nil

Student 3

NA

Student 4

NA

Student 5

Pat was very knowledgeable and I was exposed to a lot of different things but due to it being a 1 hour course we could not explore topics well enough to really learn much. I understand that the homeworks and advanced homeworks were supposed to help and they did. But I feel that only advanced homeworks get you to a level where you learn something useful and as a 1 credit course I had a lot of other tough EECS courses as I didnt expect this much work from a 1 credit course so I didnt have time to do them. I think making this a 2 or 3 credit class where you can go deeper into the material in lecture and then people will expect the amount of work given will have balanced their schedules enough to actually do all the advanced homeworks and learn the material

Student 6

Lecture was cool, but it didn't also connect with the homework as well as I'd have liked.

Student 7

NA

Student 8

I think the instruction in this course was given well, but I would have liked to see a stronger push for everyone to walk through the examples done in class with Pat because I think it would have been much more valuable.

Student 9

NA

Student 10

I only went to Pat's lectures, and he was very passionate about the topic which is very infectious. He made lecture fun and easier to learn.

Student 11

Very clearly explained

Student 12

This instruction was, while a bit free format, worked well to teach us the information

Student 13

NA

Student 14

Great

Student 15

I know that this is a pilot course, but my expectations did not align with what was actually taught. I think that the work in this course exceeds the workload of most other 1-credit courses (despite the idea that "1 credit = 3 hours of work a week"). I had a hard time understanding the value in some of the things that were taught (e.g. shell/bash, gprof, etc.). I will say, however, that if I didn't take this course, I wouldn't have learned or been comfortable using git, gdb, vim, and the command line in general. Overall, I have no regrets about taking this course. I know that this semester was a pilot, but I think that the students that take 398 in the fall could benefit from better planning and a better selection on certain topics.



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Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 004

| | |
|------------|--|
| Student 16 | <i>Teaching was good for both lecturers. Both were very receptive to feedback and making the course better overall in the future, which is really great.</i> |
| Student 17 | <i>High</i> |
| Student 18 | <i>NA</i> |
| Student 19 | <i>very good course</i> |
| Student 20 | <i>NA</i> |
| Student 21 | <i>NA</i> |
| Student 22 | <i>Loved all the instructors of this course. Each added a different component that added up to an excellent teaching staff.</i> |
| Student 23 | <i>NA</i> |
| Student 24 | <i>NA</i> |
| Student 25 | <i>NA</i> |
| Student 26 | <i>NA</i> |
| Student 27 | <i>NA</i> |
| Student 28 | <i>NA</i> |
| Student 29 | <i>NA</i> |
| Student 30 | <i>I thought it was not very good for students just starting their CS careers. I took this concurrently with EECS 280.</i> |
| Student 31 | <i>NA</i> |



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
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Student 32
NA

Student 33
NA

Student 34
Pannuto: Even though lectures were on Fridays, your enthusiasm and outstanding lectures held my attention

Student 35
Instructions were clear

Student 36
NA

Student 37
Office hours are necessary, but there have been many times I have been unable to make it, ending with hours and hours of googling/searching/wasting time.

Student 38
NA

Student 39
Pat is amazing. He has a contagious energy and I'm jealous.

Student 40
Pat did a great job making this class a reality. Needs refinement and make it more credits. There was too much work

Student 41
Good

Student 42
There were good days and bad days, and for my learning style and being most comfortable with c++ and emacs, I felt Prof. Darden's style was easier for me to follow.

Student 43
Professor Pannuto is an excellent lecturer. Keeps the class engaged and really knows his stuff

Student 44
More guidance could have been useful in some situations where some previous knowledge of the topic was required

Student 45
NA

Student 46
NA

Student 47
NA



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Instructor: Pannuto,Patrick William
EECS 398 004

Student 48
NA

Student 49
NA

Student 50
The professors were wonderful. They were clearly passionate about the subject and their enthusiasm made the course enjoyable.

Student 51
NA

Student 52
NA

Student 53
10/10 would recommend.

Student 54
more should have been taught even though i know the class was about learning to figure things out.

Student 55
NA

Student 56
NA

Student 57
NA

Student 58
NA

Student 59
All of the instructors did a great job. I am glad they put this course together

Student 60
The instruction of the course felt very interactive and directly exposed the students to applications of the course material. However, at time time ran out, leaving students to have to research on their own.

Student 61
Great!

Student 62
Mediocre. It was too slow for anyone that knows what they're doing, and too fast for the others. I found myself lost during most lectures that I was forced to attend for credit.

Student 63
Pat Pannuto is a fantastic teacher, OH, and piazza
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Student 64
Lecture wasn't all too great. Tools learned were interesting but some lectures were just a waste of time, e.g. an entire hour spent explaining the logistics of git branching. Not a wise use of time, in my opinion.

Student 65
NA

Student 66
The lectures were good (no slides! yay). Sometimes Pat would go really fast though, specifically when making scripts/programs, so I couldn't keep up with the interactive lecture and I just had to watch.

Other than that, Pat did a great job of explaining things. Good teacher.

Student 67
NA

Student 68
NA

Student 69
NA

Student 70
NA

Student 71
NA

Student 72
NA

Student 73
NA

Written Comments

911 Please comment on the quality of the course as a whole.

Student 1
NA

Student 2
Some lectures were very useful, some were not.

Student 3
NA

Student 4
NA

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Student 5
NA

Student 6
I really liked it, but it was more work than a 1 credit course.

Student 7
NA

Student 8
I learned a lot in the course and I like the structure of having one unit per week, and I like the improvement to having 2 weeks to complete the advanced homework instead of just 1 week.

Student 9
NA

Student 10
I would give the course a 8/10. Early on in the class, homework's took way too long for a 1 credit class

Student 11
Great material

Student 12
On one hand, I did learn alot, but his was mostly due to outside research. However, being that that was the point, it does work out in the end

Student 13
NA

Student 14
Awesome

Student 15
I did not find lectures to be very useful. I learned more by simply googling topics and doing the homeworks. I think that lectures could have been better planned.

Student 16
It was okay, just had some of the problems a new course does. Homework weren't always well thought out, advanced homeworks were sometimes a bit ridiculous, but exam was very fair and so were homeworks by the end.

Student 17
Very good course.

Student 18
NA

Student 19
good course

Student 20
NA



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EECS 398 004

Student 21
NA

Student 22
Only negative thing was grades weren't released quickly enough. The quality of this course is incredibly high.

Student 23
NA

Student 24
NA

Student 25
NA

Student 26
NA

Student 27
NA

Student 28
NA

Student 29
NA

Student 30
NA

Student 31
NA

Student 32
NA

Student 33
Fantastic course. Really learned a ton from this and it encouraged me to explore and keep learning even more stuff.

Student 34
Great.

Student 35
I would definitely recommend this to others

Student 36
NA

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Instructor with Comments Report

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EECS 398 004

Student 37

I think the idea of the course is fantastic, but I think there should be more teaching involved in the process, instead of finding/searching, especially when other EECS courses take a long time too. I am concurrently taking EECS 280 and EECS 203 with this class, and it made me feel overwhelmed/not worth it.

Student 38

NA

Student 39

GREAT SEMINAR EVERYONE SHOULD TAKE. DON'T CHANGE IT. THE WORKLOAD IS PERFECT TO EXPOSE YOU TO THE MATERIAL WITHOUT FORCING YOU TO DEVOTE EXCESSIVE TIME AND STRESSING ABOUT GRADES.

Student 40

8/10

Student 41

NA

Student 42

Some days I learned interesting things, and some days I left feeling like I learned hardly anything, or that what we did was such a process and gone through so quickly, I would not remember what we learned. Also, not seeing what was being done on the screen was an issue sometimes for me.

Student 43

I believe this course was very good in theory, but from the first semester its execution was flawed. There were many things I disagreed with regarding how the course was set up.

First, the workload. This course is listed as a 1-credit course but at times I felt the workload was equivalent to 2-3 credits. Most people when signing up for 1-credit courses expect minimal work. On average I felt I spent about 2-3 hours on the homework each week. This doesn't include the obscure nature of many of the advanced homework. Alongside the time I felt extremely frustrated at many of the problems that were very obscure and non-intuitive. Even googling for help gave minimal help.

Next, I disagreed with many of the topics taught. The class is called Tools for Computer Scientists. However, I felt many of the things we learned weren't really too relevant to me as a computer scientist. I understand that it's hard to teach a lot of content with only 1 hour lectures once a week. However, I felt some of the topics were either useless or so confusing that even after finishing the topic and taking the final I'm not sure I'd be able to explain any of it if asked. In particular I disliked the lectures of text editors and regex. I feel that text editors are cool to see and work with, but the lectures/homework didn't really help me that much. Regex was a topic I felt could be interesting but I'm still extremely confused and not sure I'd be able to piece one together myself. I feel the same way about shell scripting. On the plus side, I thought the git lectures were extremely helpful and applicable and were done phenomenally to explain how it worked. I just think the topics taught in the class or how they were taught could be structured better to actually feel like a tool a computer scientist might use. As a student, I felt like many of the topics/how they were taught weren't really helpful to me.

Finally, I felt the homework was not worth it. Even after the change mid-semester to make them more intuitive, I felt the homeworks were still sometimes too obscure. Some of the things that were asked were, in my opinion, so obscure or non-intuitive that even after completing the homework successfully I can't even remember how to do them. I don't feel like I gained much from some of the homeworks. This applies to advanced homeworks as well.

Student 44

a breadth of terminal knowledge

Student 45

NA

Student 46

NA



Instructor with Comments Report

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Instructor: Pannuto,Patrick William

EECS 398 004

Student 47

NA

Student 48

To much material was covered at a surface level. I think cutting down the topics and then spending two lectures discussing the material would be more valuable.

Student 49

NA

Student 50

The amount of work required for this course exceeded what I would expect from a 1 credit course. The amount of work required was on par with some of my 4 credit classes. I think that either reducing the number of topics covered or going less in depth on each topic would be helpful. I did appreciate the effort to help students explore topics more in depth outside of class, however.

Student 51

I think for the first time course it was very interesting. I think a lot of the things taught are applicable to problems faced by students in CS classes. Also learn a lot of cool things about how to work with your computer.

Student 52

NA

Student 53

Overall I loved the course, but there were many times I felt it was worth more than 1 credit. One was the advance homework, while doing the assignment usually wasn't hard, finding time to make it to Office Hours was difficult. I liked when sometimes the homework was all online. Another thing about this course is the prereq/target audience was supposed to be kids out of 101/183 and/or taken concurrently with 280. Obviously the first round of the class was going to be a lot of upper classmans but if the material and structure stay the same then I don't believe new CS people can thrive. I took this after 280 and sometimes the material was harder than expected. And this is coming from me who has been coding in VIM since 183, who spent 3-4hrs learning Makefile stuff, who has dualbooted multiple computers. I'm not bragging but the course material was definitely something I was very much interested in learning in a more formal setting. There is value in figuring stuff out on your own, through googling a problem etc but I just wished there had been a little bit more hand-holding.

Student 54

the homeworks took way too much time for a one credit class. this is more like a 3 credit class with the amount of work they gave us.

Student 55

NA

Student 56

NA

Student 57

NA

Student 58

NA

Student 59

I thought the course was well run as a whole, though I think students would benefit more if the course were 2 credits

Student 60

The course was very unique and helpful due with a different style of learning, however some concepts felt unnecessary in comparison to others.

Student 61



Instructor with Comments Report

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Instructor: Pannuto,Patrick William

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Too much work for 1 credit.

Way too much.

Student 62

It meant well, but the structure of the course was not great. It was its first semester, however, and I realize that. I did learn a good bit, and was able to apply these tools to other classes, but the volume of work and confusion this class added to my course load took away from my other classes for sure.

Student 63

NA

Student 64

Way too much work for a 1-credit course. I lost motivation halfway and elected this course as pass/fail after I realized what a time commitment it would be.

Student 65

NA

Student 66

I thought the course moved a little fast. Some of the topics I feel like I don't know that well cause there is only 1 lecture of that material. I almost wish the lecture was 1.5 hours and things could slow down a bit.

Student 67

NA

Student 68

NA

Student 69

NA

Student 70

NA

Student 71

NA

Student 72

NA

Student 73

NA

Written Comments

931 Please give any other comments on this course as a whole.

Student 1

NA



Instructor with Comments Report

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Student 2

It was useful for a CS major, as a whole.

Student 3

NA

Student 4

NA

Student 5

NA

Student 6

Please offer it more.

Student 7

NA

Student 8

I would have like more emphasis on GitHub and how to push and merge commits. We went over git and I thought it was beneficial but I just would have liked to become more comfortable with GitHub.

Student 9

NA

Student 10

For being a first time course, well done.

Student 11

NA

Student 12

I think there should be a sort of warning that the majority of the course will be research on your own

Student 13

NA

Student 14

NA

Student 15

NA

Student 16

A not there yet, but could be good in the future course. Fleshing out homeworks/lectures/grading would be a good first step, but staff clearly showed interest in doing so.

Student 17

Forced me to learned a lot of things I was to lazy to learn on my own... which is a good thing... thought it was a bit to much for a 1 credit course



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 004

Student 18
NA

Student 19
NA

Student 20
NA

Student 21
NA

Student 22

The only comment I have is that this course took WAY too much time for a 1 credit course. However, Pat and the other instructors recognized this along the way and made changes that drastically improved this aspect. I really appreciated the adaptability of the staff.

Student 23
NA

Student 24

I was really looking forward to this class and while I understand that it is a new course. I was very disappointed. I did not like the structure of any part of the class. The actual lecture should have been less exploratory and more concrete about the material it taught. In the future, lecture should be longer. I also hated homework assignments. I took this class to learn how to do things, not be forced to google how. Advanced homeworks should be removed or partial credit should be allowed for them. I spent quite a lot of time on some of them, but because I could not fully complete them, I did not get points for them and this was a major factor in me changing this class to pass/fail. I literally do not think I can list more than 2 things I have learned in the class because of the lack of structure in the material. It should be primarily instructional, not exploratory. I can google things myself and I don't need a class to tell me to do that.

Student 25
NA

Student 26
NA

Student 27
NA

Student 28
NA

Student 29
NA

Student 30
NA

Student 31
NA

Student 32



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NA

Student 33

NA

Student 34

Homeworks required too much time and effort. Too much work for a one credit course. To be fair, the assignments, especially the advanced hw, were easier after spring break.

Student 35

Great course, learns the essential things for computer scientists

Student 36

NA

Student 37

N/A

Student 38

NA

Student 39

Words cannot explain how helpful this course is. It changed the way I interact with a computer.

Student 40

NA

Student 41

Advanced Homeworks in the second half were not as good as in the first half

Student 42

It had and has potential, and I perhaps wish I had taken it after it's 'rough edges' had more time to smooth out, if you will.

Student 43

TLDR; good concept in theory, execution was somewhat flawed. Could be improved by making class somewhat less open-ended. Some topics much more useful than others

Student 44

For me as someone who did not know much about the terminal at all or much of the topics we covered, I wish I could have more easily learned more about each topic. I think this could have been done with a little more guidance in the homeworks but going more in depth with them but just explaining the reasoning for every command and ever action that is made

Student 45

NA

Student 46

NA

Student 47

NA



Instructor with Comments Report

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Instructor: Pannuto,Patrick William

EECS 398 004

Student 48

NA

Student 49

The work for this class (homeworks and advanced homeworks) took HOURS. It was wayyy too much work for a 1 credit class, and a lot of the homeworks seemed really random and vague. I expected this class to give us a good base understanding about CS topics, and the lectures achieved that, but the homeworks failed. They were too obscure and random.

Student 50

NA

Student 51

I think that some of the homeworks were a little too hard. For a one credit class I think I spent too much time trying to figure out how to do some of the homeworks.

Student 52

NA

Student 53

NA

Student 54

NA

Student 55

NA

Student 56

NA

Student 57

I was really excited to take this course. I still recommend it to my peers. It was far from perfect however. That's okay -- this was a first run and it pretty greatly differed in style from most others. I'm really happy this course finally got off the ground. I'm really excited to see where it goes in the future.

Appreciations:

The course was, generally speaking, very well organized. Everyone was more than helpful. The lectures were interesting, and the material was (for the most part) immediately relevant. The course website was laid out very well and was very helpful. Expectations were very clear from the beginning.

Complaints from this year and suggestions for the future: (in no particular order)

I found it weird that grades were diluted down to such small incremental values. Proportionally it was sound, but it was ? weird. It would be easier to quickly understand grading if most things were percent based or of the sort. Taking off sub-0.1 points here and there and everywhere was just hard to summate and comprehend. Similarly, on the course website, it'd be easier to understand how you're doing in each graded section by listing the grade scale by percent, rather than raw points. I.e. Homework: A (93%), A- (90%), etc.? This would have been especially helpful throughout the semester when we only had a partial number of assignments in.

I wish Pat and Marcus had OH scheduled throughout the semester. I appreciated the effort from the IAs (don't get me wrong, they were stellar), but there were topics I would have liked to have discussed specifically with Pat and Marcus.

This course was incredibly broad. The lectures and homework assignments were compelling, but they only very barely scratched the surface. I retained very little from my experiences in lecture and with the homework assignments alone. I only really started experimenting with the tools and seriously learning when doing the advanced assignments. This is where this class really paid out. I'd like to see fewer super-broad HW assignments in the future and a stronger requirement for advanced homework assignments. (Point: I only really started understanding git while I was working on ADV9 homework).



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Adding to the last paragraph: It was very frustrating spending hours on various homework assignments, yet not getting enough out of them for it to make a difference. I foresee this as a primary cause for other students' upset response to the course. The homework assignments were far too long, proportionally speaking, for a 1-credit course. This would have been borderline okay if the homework assignments were still helpful, but they usually weren't.

Suggestions: Increase the credit weight of this course. Making it a 2-credit course would be very reasonable for the actual workload. However, I'd advocate making it a 3 or 4 credit course and going significantly further in depth (just upping the ADV requirement would do it). I didn't take ENGN 100 or 101 courses (transfer, yay!), but I would bet this would be a great semester-after course or a great course to take alongside EECS 280.

I was in the middle of the experience level distribution this semester. It was perfectly doable for me, but took a long time. I had to learn a few new languages (or at least bits of them), but it wasn't too bad. For my more experienced peers, this was almost exclusively review. For my less experienced peers, this was absolute torture (they told me this over and over). It was almost exclusively new material for them. It was advertised as an intro-level course, but in the end that wasn't the audience it seemed to be tailored for. That upset a lot of folks.

Student 58
NA

Student 59
NA

Student 60
NA

Student 61
NA

Student 62

For a one-credit course, this class had way too much work. The advanced homeworks need more direction. I understand that the point is to explore and learn, but at least provide guides or manuals or something so we don't have to scavenge hunt. As for the homeworks, they need more guidance. As a minicourse, there is no reason why the homeworks should take any more than 2 hours. In fact, having the homeworks take near 2 hours is cruel as well. This class is a minicourse to supplement our learning, and the work and workload should reflect that.

Student 63
NA

Student 64

Pannuto needs to teach the course more objectively and with less personal bias. In one lecture, he said that "git commit -m is the ABSOLUTE WORST thing you could ever do with git," explaining that the messages we attach to git commits are often meaningless and that it's a wiser choice to open git commits in VIM and put more informative messages there. Not only does this take more time and effort, but as soon as Pat uttered that extreme statement, I could not seriously listen to the advice he was about to give. I strongly advise that he makes an effort to stay away from situations like this.

Student 65
NA

Student 66

Pat, a room where they have two projection screens would be great so you could have one screen dedicated to one screen (easier to see).

Also I don't know why, but this class felt like more of a community than other classes I've taken, despite the the same amount of interaction. I think the staff was just really passionate and that came through. Working on the website as a class was my favorite thing this semester, and it was good experience.

Student 67
NA

Student 68

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NA

Student 69
Weekly homework assignments were sometimes harder than probably intended and required more work than a typical 1-credit course, but were, overall, quite manageable, especially considering the grading method. Advanced homework assignments, though, are what really pushed the workload above what is expected of a 1-credit course.

Student 70
NA

Student 71
NA

Student 72
NA

Student 73
NA

Written Comments

1098 Among the courses you have already taken, which proved the most (or least) effective in preparing you for this course, and why?

Student 1
NA

Student 2
NA

Student 3
NA

Student 4
NA

Student 5
NA

Student 6
EECS 183 (python)

Student 7
NA

Student 8
I think just having taken EECS 281 and learning how to figure out problems by myself and how to google questions (lol-but seriously) helped me most in this course.

Student 9
NA

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Student 10
EECS 281? Not really any

Student 11
probably any programming course

Student 12
EECS 280 was very helpful, since it introduced, but mostly glossed over, various things that were gone in more depth here.

Student 13
NA

Student 14
any eeecs

Student 15
EECS 281 because the material in both classes go hand-in-hand

Student 16
Probably EECS 280, I think you need familiarity with Linux for this to be effective.

Student 17
uhhh.... EECS 281, maybe, since I learned the most programming in that course.

Student 18
NA

Student 19
NA

Student 20
NA

Student 21
NA

Student 22
280 and 281 were useful because they gave me projects to work with to test out the concepts we learned in this class - git, python scripting, etc.

Student 23
NA

Student 24
NA

Student 25
NA

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Student 26
NA

Student 27
NA

Student 28
NA

Student 29
NA

Student 30
NA

Student 31
NA

Student 32
NA

Student 33
EECS280

Student 34
EECS 280. Simply because I learned git, vim, and makefiles. As a downside, those weeks were difficult to pay attention because I for the most part knew the material

Student 35
EECS 183?

Student 36
NA

Student 37
N/A

Student 38
NA

Student 39
101 taught me how painful it can be to program when you first start out.

Student 40
NA

Student 41
NA



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Student 42
280, helped overall.

Student 43
NA

Student 44
281 because I taught myself gproff and gdb and valgrind

Student 45
NA

Student 46
NA

Student 47
NA

Student 48
N/A

Student 49
NA

Student 50
EECS 280 was the most effective, because lecture often required a basic knowledge of things that I was exposed to in EECS 280.

Student 51
EECS 280 - most difficult EECS class taken thus far.

Student 52
NA

Student 53
EECS 280

Student 54
NA

Student 55
NA

Student 56
NA

Student 57
EECS 280 was certainly helpful, but not required.

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Student 58
NA

Student 59
eeecs 280 -> this should be the pre-rec had i come in from engin 101 or eeecs 183 I would have been completely lost

Student 60
EECS 183 introduces the concept of programming as well as some Python and EECS 280/281/370 utilize the command line, but most of the material in the course was completely new and cannot be learned from previous courses.

Student 61
EECS 280

Student 62
NA

Student 63
281/280 - because this course does involve a lot of reading of obscure docs and programming

Student 64
NA

Student 65
NA

Student 66
EECS 280/281. Thats where I learned some basic commands, which are necessary for this course.

Student 67
NA

Student 68
NA

Student 69
NA

Student 70
NA

Student 71
NA

Student 72
NA

Student 73



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Winter 2016 Final
73 students responded out of the total enrolled 98

Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 004
NA

* The quartiles are calculated from Winter 2016 data. The university-wide quartiles are based on all UM classes in which an item was used. The school/college quartiles in this report are based on upper division classes with an enrollment of 75 to 9999 students in College of Engineering.

** SA - Strongly Agree, A - Agree, N - Neutral, D - Disagree, SD - Strongly Disagree, NA - Not Applicable.



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto, Patrick William
EECS 398 005

| | Responses from your Students** | | | | | | | | | | Your Median | | | | Other Users of This Item* | | | |
|-----|--------------------------------|----|----|----|----|----|------|------|------|------|-------------|-----------|-----------|-----------|---------------------------|------|----------------|------|
| | 5 | | 4 | | 3 | | 2 | | 1 | | NA | 75% Above | 50% Above | 25% Above | University Wide | | School/College | |
| | SA | A | A | N | D | D | SD | 1 | 0 | 0 | | | | | 0 | 0 | 0 | 0 |
| 1 | 32 | 23 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.50 | 4.00 | 4.33 | 4.75 | 3.95 | 4.22 | 4.52 |
| 2 | 45 | 14 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.81 | 4.25 | 4.67 | 4.88 | 4.13 | 4.44 | 4.67 |
| 3 | 33 | 23 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.53 | 4.00 | 4.44 | 4.75 | 4.05 | 4.33 | 4.56 |
| 4 | 44 | 14 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.77 | 3.63 | 4.14 | 4.63 | 3.56 | 4.14 | 4.50 |
| 61 | 31 | 17 | 3 | 9 | 0 | 4 | 4.53 | 4.14 | 4.38 | 4.58 | 0 | 4.53 | 4.14 | 4.38 | 4.58 | 0 | 0 | 0 |
| 140 | 31 | 23 | 6 | 3 | 1 | 0 | 4.46 | 3.95 | 4.31 | 4.67 | 0 | 4.46 | 3.95 | 4.31 | 4.67 | 0 | 0 | 0 |
| 201 | 41 | 18 | 2 | 0 | 1 | 0 | 4.74 | 4.13 | 4.58 | 4.81 | 0 | 4.74 | 4.13 | 4.58 | 4.81 | 0 | 0 | 0 |
| 203 | 38 | 19 | 4 | 0 | 1 | 0 | 4.68 | 4.25 | 4.63 | 4.82 | 0 | 4.68 | 4.25 | 4.63 | 4.82 | 0 | 0 | 0 |
| 207 | 49 | 11 | 2 | 0 | 0 | 0 | 4.87 | 4.63 | 4.83 | 4.94 | 0 | 4.87 | 4.63 | 4.83 | 4.94 | 0 | 0 | 0 |
| 216 | 47 | 13 | 2 | 0 | 0 | 0 | 4.84 | 4.42 | 4.70 | 4.88 | 0 | 4.84 | 4.42 | 4.70 | 4.88 | 0 | 0 | 0 |
| 218 | 42 | 15 | 4 | 0 | 0 | 0 | 4.77 | 4.34 | 4.67 | 4.83 | 0 | 4.77 | 4.34 | 4.67 | 4.83 | 0 | 0 | 0 |
| 228 | 29 | 15 | 8 | 5 | 4 | 0 | 4.40 | 4.11 | 4.50 | 4.74 | 0 | 4.40 | 4.11 | 4.50 | 4.74 | 0 | 0 | 0 |
| 229 | 34 | 20 | 5 | 2 | 1 | 0 | 4.59 | 4.20 | 4.62 | 4.83 | 0 | 4.59 | 4.20 | 4.62 | 4.83 | 0 | 0 | 0 |
| 230 | 41 | 17 | 3 | 1 | 0 | 0 | 4.74 | 4.53 | 4.80 | 4.92 | 0 | 4.74 | 4.53 | 4.80 | 4.92 | 0 | 0 | 0 |
| 232 | 34 | 21 | 5 | 4 | 0 | 0 | 4.56 | 4.13 | 4.46 | 4.73 | 0 | 4.56 | 4.13 | 4.46 | 4.73 | 0 | 0 | 0 |
| 239 | 17 | 10 | 11 | 10 | 16 | 0 | 3.05 | 4.00 | 4.33 | 4.67 | 0 | 3.05 | 4.00 | 4.33 | 4.67 | 0 | 0 | 0 |
| 240 | 26 | 23 | 7 | 7 | 0 | 0 | 4.26 | 4.07 | 4.33 | 4.65 | 0 | 4.26 | 4.07 | 4.33 | 4.65 | 0 | 0 | 0 |
| 318 | 24 | 21 | 11 | 3 | 0 | 4 | 4.24 | 4.00 | 4.25 | 4.67 | 0 | 4.24 | 4.00 | 4.25 | 4.67 | 0 | 0 | 0 |
| 340 | 12 | 3 | 5 | 2 | 1 | 40 | 4.54 | 3.38 | 4.00 | 4.50 | 0 | 4.54 | 3.38 | 4.00 | 4.50 | 0 | 0 | 0 |
| 356 | 32 | 27 | 2 | 2 | 0 | 0 | 4.52 | 4.14 | 4.44 | 4.70 | 0 | 4.52 | 4.14 | 4.44 | 4.70 | 0 | 0 | 0 |
| 365 | 32 | 26 | 4 | 2 | 0 | 0 | 4.50 | 4.00 | 4.33 | 4.67 | 0 | 4.50 | 4.00 | 4.33 | 4.67 | 0 | 0 | 0 |
| 366 | 36 | 24 | 3 | 1 | 0 | 0 | 4.61 | 4.10 | 4.50 | 4.75 | 0 | 4.61 | 4.10 | 4.50 | 4.75 | 0 | 0 | 0 |
| 23 | 29 | 26 | 4 | 3 | 0 | 0 | 4.42 | 4.07 | 4.28 | 4.59 | 0 | 4.42 | 4.07 | 4.28 | 4.59 | 0 | 0 | 0 |
| 38 | 15 | 9 | 8 | 6 | 1 | 23 | 4.00 | n/a | n/a | n/a | 23 | 4.00 | n/a | n/a | n/a | 23 | 4.00 | n/a |
| 60 | 26 | 26 | 5 | 3 | 1 | 1 | 4.33 | 4.25 | 4.50 | 4.83 | 1 | 4.33 | 4.25 | 4.50 | 4.83 | 1 | 1 | 1 |
| 174 | 25 | 24 | 6 | 4 | 1 | 1 | 4.29 | 4.12 | 4.53 | 4.81 | 1 | 4.29 | 4.12 | 4.53 | 4.81 | 1 | 1 | 1 |
| 369 | 31 | 26 | 4 | 1 | 0 | 0 | 4.50 | 4.21 | 4.50 | 4.67 | 0 | 4.50 | 4.21 | 4.50 | 4.67 | 0 | 0 | 0 |
| 222 | 17 | 19 | 8 | 9 | 1 | 8 | 3.97 | 3.50 | 4.13 | 4.50 | 8 | 3.97 | 3.50 | 4.13 | 4.50 | 8 | 8 | 8 |
| 11 | 43 | 15 | 1 | 1 | 1 | 0 | 4.79 | 4.50 | 4.79 | 4.83 | 0 | 4.79 | 4.50 | 4.79 | 4.83 | 0 | 0 | 0 |

Written Comments

900 Comment on the quality of instruction in this course.

Student 1
I thought the instructing was very good from both of the lecturers.



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 005

Student 2
NA

Student 3
NA

Student 4
Great

Student 5
A good course! The lecturers were very engaging and friendly, which may not seem important, but really really is. A lot of times, computational skills like this have a high learning curve, but asking for help can be stigmatized. Simply put, it's hard to be a newcomer to CS. I think the lecturers did a really good job of erasing some of the barriers of learning new skills.

Student 6
This class was great and very helpful for other CS classes. Also thanks for changing the course after the first couple lectures the teaching style improved as did the difficulty of the homework.

Student 7
NA

Student 8
NA

Student 9
Really great. The lectures were super!

Student 10
NA

Student 11
NA

Student 12
NA

Student 13
Very well taught--lectures were unique and interesting, and provided clarity on many concepts I had previously not known.

Student 14
A++, clear and complete, excellent job recording terminal input along with just video recordings

Student 15
NA

Student 16
Instruction was alright, I get that they wanted me to figure things out on my own but I would spend hours on the internet trying to find anything to help me and in those hours I'm really not learning anything, i wish they gave more resources to help



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Winter 2016 Final
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Instructor with Comments Report

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Instructor: Pannuto,Patrick William

EECS 398 005

Student 17

Panutto is great instructor and clearly cares about the course and the students

Student 18

NA

Student 19

Good

Student 20

NA

Student 21

NA

Student 22

NA

Student 23

NA

Student 24

It was bad at first but then got better.

Student 25

The teaching was pretty good, although we often ran out of time.

Student 26

NA

Student 27

NA

Student 28

it was good

Student 29

Pat is enthusiastic about everything, which is refreshing. Also, he did a good job thoroughly explaining and simplifying some of the concepts and brushing over more complicated/unnecessary details.

Student 30

It was good

Student 31

Pat was very good at explaining course concepts and seemed very passionate about what he was teaching.

Student 32

Good instruction given the fact this was the first semester ever.

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Instructor with Comments Report

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Instructor: Pannuto,Patrick William
EECS 398 005

Student 33
This course required much more work than necessary for a 1 credit class. But the class was still enjoyable and manageable.

Student 34
NA

Student 35
NA

Student 36
NA

Student 37
I enjoyed this class, but I strongly feel that it was too much work for a 1 credit course. I am interested in this material, and I was very excited to take this class, but I often had to focus more on just getting the assignments done on time than actually learning and enjoying myself, which was not what I expected. The professors and IAs were friendly and enthusiastic, but I think that if the target audience for this class is students that are in EECS 280/281 and not upper levels, the course should reflect that better (i.e. fewer topics covered, smaller, more concentrated homework assignments). As a student currently in EECS 281, I felt that some of what we learned was more appropriate for students with more experience than me.

Student 38
NA

Student 39
NA

Student 40
Although I realized self-study is important, sometimes I wish I could get more support from the homework instructions so that we don't waste several hours working in a wrong direction (which happened several times to me this semester).

Student 41
NA

Student 42
NA

Student 43
Good instructor team

Student 44
Very Good and Useful

Student 45
NA

Student 46
NA

Student 47
Instructors were great. Classes could have been a little more structured.



Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 005

Student 48
NA

Student 49
NA

Student 50
NA

Student 51
High quality instruction

Student 52
I thought it was good! Pat did a good job lecturing. The homeworks were way to long and hard for a one credit course. The point of the homework was a self guided study, however they went into too much depth for a single homework assignment. I think whoever wrote them forgot what it is like to learn new tools and concepts from nothing. It takes a while! Just because something is easy for you doesn't mean that it can be learned easily by students.

Student 53
Pat did a fantastic job of being energetic and being interactive. He seemed to really try to gauge our interests.

Student 54
Decent

Student 55
The vast well of knowledge that Dr. Pannuto and Dr. Darden contained added to the credibility of this course. As someone who already had bits of knowledge on all of the topics I felt like they were always able to handle things when something didn't work exactly right, or were able to explain things very clearly. Pannuto's energy and enthusiasm really added to the lecture.

Student 56
NA

Student 57
Pat was very enthusiastic about this course which was encouraging. He was always willing to answer questions. IA's tended to not be as approachable as I would've liked.

Student 58
They're my two favorite lecturers for a reason

Student 59
Lots of technical problems in the course, including entire lectures that proved useless because Pannuto/Darden couldn't get the virtual machine to work. I think it's a preference, but I really dislike the "improv" teaching style where the lectures aren't planned out and they play around on the computer in front of us hoping we learn something.

Student 60
Pat is super passionate about the material and really wants to help people learn. He made things that weren't really naturally interesting interesting. all the TAs were really knowledgeable too despite it being the first time the course was offered.

Student 61
I was really excited for this course when I heard about it last semester. But after having taken the course I can say that I truly regret taking it or at least not taking it pass fail. This course was marketed at people like me just starting their computer science curriculum at Michigan. It was intended to teach these students skills that are expected of you in the upper level courses. Unfortunately I do not believe that it was taught that way. While I



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found the demos during class interesting they really did not teach me anything because they were too fast and only the people that already knew the material were able to answer the questions being asked. I believe that the class was more geared towards people that already knew the information succeeding then those that actually knew nothing and wanted to learn the material. While I could eventually finish the homeworks it often took me 5-8 hours to actually do so. Then because the regular homeworks were so difficult for me the advanced homeworks were nearly impossible for me to understand on my own. The other problem I have had was that almost all of the office hours for this class were during my other courses which made it nearly impossible to get help and get my advanced homeworks approved. I finally thought I understood and advanced homework (the one of gcov) so I went to office hours to get it approved. When I got to office hours the TA told me I was missing a small detail and to fix it and then he'll come back and check in with me. So I fixed it and then when he came back, he said that there was another part that needed fixing. Then he came back again, said there was something else I needed to do, although I had thought I had done everything the assignment asked me to. So I went about fixing that last issue and I assumed he would come back to me. Then when I was certain I was finished he walked past me, looked at me, and then walked over to tell me that his office hours had ended and that he could no longer help me. He then told me it would be a good idea to sign up for the next office hours but there were already a lot of people on it. I then told him that I couldn't stay much longer because I had to go to class. He then proceeded to laugh at me and say "That sucks." Needless to say, I haven't been to an office hours since because his is the only one that I don't have class during. I felt so degraded in that moment. I was trying my best to complete an assignment that I FINALLY thought I was capable of doing and he laughed at me. I had tried my best but apparently that was not enough and so he thought it was appropriate to laugh at my inabilities. I decided that I would rather take a 0% for advanced hw than to feel the way he made me feel ever again.

Student 62

The instruction of this course was excellent and included a lot of freedom which was appreciated.

Student 63

NA

Student 64

very good, instructors clearly knew what they were doing and knew how to teach students how to learn how to do things

Student 65

The instructions provided were clear

Written Comments

911 Please comment on the quality of the course as a whole.

Student 1

I took this course thinking it was for beginners like me, as in those taking 280 and possibly 281. But a lot of the things they taught were taught in a way that was hard for me to follow and I had to learn a lot of the lectures on my own or with my friend because i wouldn't understand it.

Student 2

NA

Student 3

NA

Student 4

Great

Student 5

A good course! Would recommend (have recommended). Lots of interesting things to learn, and it made me more comfortable being confused and looking things up.

Student 6

I really liked how useful the scripting stuff was. We spent a little too much time on git.

Student 7

NA

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Student 8
NA

Student 9
The course was really cool and I learned a lot. I wish there was some sort of lecture notes (or at least more in-depth list of topics covered) because if I didn't take notes then I would have to watch the lecture to find a specific point.

Student 10
NA

Student 11
I definitely learned a lot in this course that I was expecting to learn when i signed up for the course, but i felt that the homework was a bit too work-heaving.

Student 12
NA

Student 13
Useful for any introductory computer scientist.

Student 14
A necessity for everyone EECS student.

Student 15
NA

Student 16
NA

Student 17
Definitely too much work for only 1 credit but the information I got out of it was great

Student 18
NA

Student 19
Good

Student 20
NA

Student 21
NA

Student 22
NA

Student 23



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Winter 2016 Final
65 students responded out of the total enrolled 105

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NA

Student 24

Improved throughout the semester. Definitely not a fan of the advanced homeworks.

Student 25

The advanced homeworks were a little too hard.

Student 26

NA

Student 27

NA

Student 28

It was good

Student 29

I think that for 1 credit the course was definitely too much work. I feel like if less material were covered and homeworks were biweekly it would be more appropriate for the credits received. However, the knowledge on git and IDEs (and all the extra things you can make them do) was super helpful for where I am now in my studies (281, taking 370 next semester, and I know 485 has group projects, so I'll NEED to know git).

Student 30

It was good but some of the assignments took way too long for a 1 credit class

Student 31

Great website, lots of work for a one credit course. Homework is graded to harshly. A better approach would be 0,1, or 2 based on effort.

Student 32

Well run course. Some hiccups but good overall.

Student 33

NA

Student 34

NA

Student 35

NA

Student 36

NA

Student 37

NA

Student 38

NA



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Student 39

NA

Student 40

This is a perfect course!

Student 41

NA

Student 42

NA

Student 43

This was a great course. I needed to take this course to booster my computer science skills

Student 44

Very Good and Useful

Student 45

NA

Student 46

NA

Student 47

Interesting topics. Homeworks and advanced homeworks could use more structure and development.

Student 48

NA

Student 49

NA

Student 50

NA

Student 51

Good quality, many relevant and interesting topics

Student 52

The homework was wataaaaaaaay to long for a 1 credit course. It often took between 5 and 6 hours to complete. I'm not dumb and I do have some experience with the topics covered, but I think the instructor overestimated the students knowledge and experience. Learning python in two hours doesn't "just happen." I probably 6 hours struggling with that homework before I gave up. And I didn't want to go to office hours because that would have defeated the purpose of self learning. That being said, the things I learned on homeworks were extremely valuable and I did learn a ton in this course, but I didn't expect the workload to be this high for one credit. This was an issue because I already had a pretty hard semester without this course, and I thought this would be a fun/interesting and light addition to my schedule. I am glad I learned what I did, but I probably would not have taken it if I knew how much time it would take up. A way to fix this issue might be to make it work more credits, or make the required homeworks shorter, but have additional parts for the motivated or less busy students.

Student 53

I was pretty frustrated with some aspects of this course. I felt like I was far behind all of the other students who were older and had more experience. I usually spent more time on this homework than all of my other classes

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and still struggled to gain a deep understanding. I attended every lecture, took notes, and participated often and still did very poorly on the exam. I think that an additional lab or discussion in a smaller section with in class homeworks rather than on our own would have been more beneficial to me. Some of the homeworks I just had to bs because I was so lost so I didn't gain a lot from them always.

Student 54

Thought it would be chillier, it was serious

Student 55

As advertised, much more beneficial to 2nd / 3rd year students. While I don't regret taking this class as a senior, there were some things which I felt like were much more helpful to me. Bash scripting, pipes, command line tools - these were the most useful things I learned here. The git lectures while helpful I think that without a big project and context it is not as helpful.

Student 56

NA

Student 57

Overall, I did learn a lot from this course (but I didn't know much going in). Most topics were covered a bit too quickly and there were a lot of things that were assumed students knew already. I also would've loved for there to have been a female TA.

Student 58

NA

Student 59

It's a new course. I don't think the professors knew what they were getting themselves into by selling this class to students that seemed like the holy grail of special topics courses when the course was very underdeveloped.

Student 60

computer science is a really vast subject and its really hard to fit all this information into one course, especially a one credit course. I think especially with the advanced homework it would be cool to stretch it over 2 semesters as a one credit course each semester so that students could learn the material better.

Student 61

I have never felt more stupid in my entire life. This class was marketed towards me but it felt like the only people that could succeed were the people that already knew all of the information.

Student 62

This course is extremely useful for freshmen and sophomores in computer science; however, I wish I took this class sooner.

Student 63

I learned a lot. But a lot of times lecture seemed fairly irrelevant to the homework we received. I was forced to waste tons of time just googling how to do things because they weren't taught. Some weeks, I spent more time on homework for this class than I did on one of my 4-credit classes. You really need to focus the lecture material better and make homeworks more relevant to class material. Based on my experienced this semester, I personally wouldn't recommend this class to any of my friends.

Student 64

very good in teaching people how to solve their own problems and how to use some common tools that students might have avoided using because they didn't want to spend the time (or didn't have the time) to learn how to use them

Student 65

Was challenging but not difficult

Written Comments

931 Please give any other comments on this course as a whole.



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Instructor: Pannuto,Patrick William
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Student 1
NA

Student 2
NA

Student 3
NA

Student 4
Great

Student 5
Please, in the future, think about hiring some staff who aren't men. Again, it may not seem important, but I promise (as a female CS student) it 100% is. Like I said before, it's hard to be a newcomer in CS, and this course HAS done a really good job of erasing some of that difficulty. But it's also hard to be a woman in CS, and this course maybe doesn't help with that. With a male-only staff, you kind of give the impression that only men are capable of teaching these kinds of computing skills, which is the popular conception, but which also isn't true. Overall, again, a really good course!

Student 6
NA

Student 7
NA

Student 8
NA

Student 9
I think it would be cool to (maybe give credit for an advanced homework) let students taking the course do a project for pleasure and get credit for it (after it was ok'd with the course staff). I think that would promote using computer science to do something interesting and having personal projects looks good on resumes.

Student 10
NA

Student 11
I did not really like the open ended classes because it was harder to do the assignments. A lot of the time, i felt like the lecture did not help as much on the homework. Often times I would spend A LOT of time on google searching for the answers. I feel like the course was a bit of a struggle for me and did not really seem like a 1-credit class. but more of a 2-3 credit class because I was not as experienced as the other people in the class; I am fairly new to the computer science world.

Student 12
NA

Student 13
Probably too much hw/advanced hw for only a single credit. Felt like it reflected a 2 or 3 credit hour class in terms of hw.

Student 14
NA



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Student 15
NA

Student 16
NA

Student 17
NA

Student 18
NA

Student 19
Good

Student 20
NA

Student 21
NA

Student 22
NA

Student 23
NA

Student 24
Really frustrating at first since the amount of time put into it was much higher than what I expected out of a 1-credit class. Got better near the end though.

Student 25
I liked the bash and python scripting portion. I've used both for my EECS 281 projects regarding running through my test files and generating random test cases.

Student 26
NA

Student 27
NA

Student 28
It was god

Student 29
NA

Student 30
NA



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Student 31

NA

Student 32

I enjoyed the course and learned some material.

Student 33

NA

Student 34

Advanced homeworks were in general too much work when combined with the regular homeworks, and having to turn them in only at office hours is a terrible plan. While there were office hours most days, they were largely when I had other classes. Mostly the ones I could actually go to were not well timed because I hadn't done any work on the advanced homework yet because a 1 credit class is not high on the priority list. Combined with the wait times, the advanced homeworks were a really bad experience that really brought the class down.

Student 35

The course could've been more flexible since it's meant to improve individual's skills. Also, having to go to office hours for advanced homework is not a good idea. I would rather have that as an optional option like the last homework.

Student 36

NA

Student 37

It was a good first run of the course! I just think it needs to be revised.

Student 38

NA

Student 39

NA

Student 40

Preliminary lecture notes are helpful if provided. It might be more helpful if some lecture slides are used in addition to only demonstrating in class

Student 41

NA

Student 42

NA

Student 43

Great course taught by two by two great guys that know their stuff

Student 44

Wish this had been available earlier

Student 45

NA



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EECS 398 005

Student 46

NA

Student 47

Homeworks should not be dependent on previous homeworks (I'm thinking of Git assignments), because the grades are structured such that one can miss a homework assignment or two.

Student 48

NA

Student 49

NA

Student 50

I learned so many super relevant things! Pat is an incredible instructor. His passion and enthusiasm really make a huge difference in the students' education.

Student 51

encouraged exploration

Student 52

NA

Student 53

NA

Student 54

Solid course

Student 55

More bash scripting! I took this class to learn about the "unknown linux bits" like rc files, environment variables, bash scripting, and just how to more effectively use my computer.

Student 56

NA

Student 57

NA

Student 58

It should be a permanent course!

Student 59

Not terrible, but definitely in its beta stage. I think the class should be taken down for a year so Pannuto can figure out what the class should be, because this semester was 100% useless. WAY too much homework!! The advanced assignments make this class go above and beyond what a 1 credit class should contain.

Student 60

the material is really interesting and SUPER useful. It would be really cool if there could be lectures like this outside of a university course like a public lecture 1x per week on a topic for beginner programmers.

Student 61

This course would be better if we were actually taught the information not just assumed to figure out EVERYTHING on our own without any guidance. I get the idea of learning on our own but it would have been helpful if

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Instructor: Pannuto,Patrick William

EECS 398 005

we were at least pointed in the right direction, whether that be helpful links or articles or tutorials, anything would have been helpful.

Student 62
NA

Student 63

This class really didn't need a final. The things we learned are all things that I could easily accomplish by searching on the internet. For example, why would I ever need to memorize how to do things in emacs if I'm never going to use it again? In addition, a final for a one credit class is excessive. We already have weekly assignments along with 3 required advanced homeworks. This is PLENTY of work for a one credit class (in fact, maybe too much). Don't throw a final on top of it.

Student 64
would have liked to make it more credits and more work so that we could go deeper into concepts/tools or at least longer lectures so that we didn't have to rush so much during lecture

Student 65
NA

Written Comments

1098 Among the courses you have already taken, which proved the most (or least) effective in preparing you for this course, and why?

Student 1

Obviously all my computer science classes gave me some help with this but not a lot.

Student 2
NA

Student 3
NA

Student 4
Makefile usefull

Student 5
Hmm, EECS 183 maybe? Also 281, which is where I learned GDB.

Student 6
NA

Student 7
NA

Student 8
NA

Student 9
NA

Student 10



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Winter 2016 Final
65 students responded out of the total enrolled 105

Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 005
NA

Student 11
NA

Student 12
NA

Student 13
n/a

Student 14
NA

Student 15
I didn't really feel well prepared by any of my classes. Granted, I haven't taken eeecs 281 yet, but I thought the material would be more beginner level.

Student 16
no eeecs class i took prepared me for this class, I felt completely overwhelmed and I did well in 280/281

Student 17
Self experimentation with stuff

Student 18
NA

Student 19
Good

Student 20
NA

Student 21
NA

Student 22
NA

Student 23
NA

Student 24
ENGR 101 since we never touched on how any of the things on top of code worked.

Student 25
I'd say the demands from EECS 281 helped a lot. Since the projects were pretty large-scale, they required a lot of help from testing and version control which I picked up in this class.

Student 26

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Winter 2016 Final
65 students responded out of the total enrolled 105

Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 005

NA

Student 27

NA

Student 28

eecs183 b/c it taught me basics

Student 29

None helped much really.

Student 30

EECS 280 helped the most

Student 31

NA

Student 32

None of the EECS courses really "prepared" me for this.

Student 33

NA

Student 34

NA

Student 35

NA

Student 36

NA

Student 37

EECS 280/281 - I had previous exposure to some of the things we learned like valgrind, gdb, etc.

Student 38

NA

Student 39

NA

Student 40

EECS183 280

Student 41

NA

Student 42

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Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 005

NA

Student 43

none

Student 44

NA

Student 45

NA

Student 46

NA

Student 47

EECS 280

Student 48

NA

Student 49

NA

Student 50

NA

Student 51

ENGR 151, where I learned about the command line through discussion

Student 52

I'm not sure

Student 53

None really helped that much - I wish we learned this stuff earlier!!

Student 54

280 is helpful.

Student 55

All of them

Student 56

NA

Student 57

I wish E101 provided a better understanding of these tools like 183.

Student 58

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Winter 2016 Final
65 students responded out of the total enrolled 105

Instructor with Comments Report

2016-04-07 - 2016-04-19 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 005
NA

Student 59
EECS 280 to understand command line

Student 60
eecs 281(currently enrolled)

Student 61
nothing could have prepared me for the lack of teach that I felt I received

Student 62
NA

Student 63
NA

Student 64
EECS 183 gave me enough background in git to understand the basics of git. It would have been really nice to learn about profiling and debugging before taking EECS 281 (was taking 281 with 398).

Student 65
280 prepared me the most

* The quartiles are calculated from Winter 2016 data. The university-wide quartiles are based on all UM classes in which an item was used. The school/college quartiles in this report are based on upper division classes with an enrollment of 75 to 9999 students in College of Engineering.

** SA - Strongly Agree, A - Agree, N - Neutral, D - Disagree, SD - Strongly Disagree, NA - Not Applicable.



Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 002

| | Responses from your Students** | | | | | | | | | | Other Users of This Item* | | | | | | | |
|---|--------------------------------|----|---|---|---|---|------|------|------|--------------|---------------------------|-----------------|--------------|--------------|----------------|--------------|------|--|
| | 5 | | 4 | | 3 | | 2 | | 1 | | Your Median | University Wide | | | School/College | | | |
| | SA | A | A | N | D | D | SD | SD | NA | 75% Above | | 50% Above | 25% Above | 75% Above | 50% Above | 25% Above | | |
| 4 | 10 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.50 | 3.75 | 4.19 | 4.64 | 3.80 | 4.19 | 4.57 | |
| 891 | 4 | 4 | 4 | 5 | 2 | 0 | 0 | 0 | 0 | 3.13 | 2.83 | 3.13 | 3.42 | | | | | |
| I had a strong desire to take this course. As compared with other courses of equal credit, the workload for this course was (SA=Much Lighter, A=Lighter, N=Typical, D=Heavier, SD=Much Heavier). | | | | | | | | | | | | | | | | | | |
| 1631 | 7 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4.20 | 4.10 | 4.41 | 4.75 | | | | | |
| 1632 | 7 | 10 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4.20 | 3.75 | 4.19 | 4.63 | | | | | |
| 1633 | 9 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4.36 | 4.00 | 4.33 | 4.67 | | | | | |
| I knew what was expected of me in this course. (SA=Almost Always, A=Frequently, N=Sometimes, D=Occasionally, SD=Hardly Ever). | | | | | | | | | | | | | | | | | | |
| 230 | 12 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.71 | 4.50 | 4.80 | 4.92 | | | | | |
| The instructor seemed well prepared for class meetings. (SA=Almost Always, A=Frequently, N=Sometimes, D=Occasionally, SD=Hardly Ever) | | | | | | | | | | | | | | | | | | |
| 199 | 12 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4.71 | 4.25 | 4.67 | 4.86 | | | | | |
| The instructor explained material clearly. (SA=Almost Always, A=Frequently, N=Sometimes, D=Occasionally, SD=Hardly Ever) | | | | | | | | | | | | | | | | | | |
| 217 | 15 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.87 | 4.69 | 4.86 | 4.95 | | | | | |
| The instructor treated students with respect. Overall, this was an excellent course. | | | | | | | | | | | | | | | | | | |
| 2 | 8 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4.21 | 3.88 | 4.31 | 4.71 | 3.82 | 4.17 | 4.50 | 4.50 | |
| Overall, the instructor was an excellent teacher. | | | | | | | | | | | | | | | | | | |
| 3 | 8 | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4.77 | 4.33 | 4.73 | 4.90 | 4.17 | 4.60 | 4.79 | 4.56 | |
| I learned a great deal from this course. | | | | | | | | | | | | | | | | | | |
| 61 | 9 | 5 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 4.25 | 4.00 | 4.36 | 4.71 | 3.91 | 4.25 | 4.56 | 4.56 | |
| Prerequisites provided adequate preparation for this course. | | | | | | | | | | | | | | | | | | |
| 140 | 9 | 8 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 4.38 | 3.90 | 4.26 | 4.53 | | | | | |
| I deepened my interest in the subject matter of this course. | | | | | | | | | | | | | | | | | | |
| 201 | 13 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4.77 | 4.20 | 4.61 | 4.83 | | | | | |
| The instructor gave clear explanations. | | | | | | | | | | | | | | | | | | |
| 203 | 11 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4.64 | 4.33 | 4.67 | 4.85 | | | | | |
| The instructor stressed important points in lectures/discussions. | | | | | | | | | | | | | | | | | | |
| 207 | 15 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.87 | 4.67 | 4.86 | 4.94 | | | | | |
| The instructor appeared to have a thorough knowledge of the subject. | | | | | | | | | | | | | | | | | | |
| 216 | 15 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.87 | 4.50 | 4.73 | 4.88 | | | | | |
| The instructor acknowledged all questions insofar as possible. | | | | | | | | | | | | | | | | | | |
| 218 | 12 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.71 | 4.33 | 4.67 | 4.83 | | | | | |
| The instructor encouraged constructive criticism. | | | | | | | | | | | | | | | | | | |
| 228 | 11 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4.64 | 4.19 | 4.50 | 4.73 | | | | | |
| The instructor followed an outline closely. | | | | | | | | | | | | | | | | | | |
| 229 | 11 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4.64 | 4.21 | 4.63 | 4.83 | | | | | |
| The instructor used class time well. | | | | | | | | | | | | | | | | | | |
| 232 | 12 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4.67 | 4.00 | 4.36 | 4.67 | | | | | |
| Work requirements and grading system were clear from the beginning. | | | | | | | | | | | | | | | | | | |
| 239 | 6 | 5 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 3.70 | 3.94 | 4.20 | 4.50 | | | | | |
| The amount of work required was appropriate for the credit received. | | | | | | | | | | | | | | | | | | |
| 240 | 7 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4.23 | 4.00 | 4.25 | 4.56 | | | | | |
| The amount of material covered in the course was reasonable. | | | | | | | | | | | | | | | | | | |
| 318 | 8 | 9 | 2 | 0 | 0 | 0 | 0 | 1 | 4.33 | 4.00 | 4.20 | 4.60 | | | | | | |
| Writing assignments seemed carefully chosen. | | | | | | | | | | | | | | | | | | |
| 340 | 4 | 4 | 3 | 0 | 1 | 8 | 4.00 | 3.33 | 4.00 | 4.50 | 4.00 | 4.50 | | | | | | |
| The textbook made a valuable contribution to the course. | | | | | | | | | | | | | | | | | | |
| 356 | 4 | 4 | 4 | 0 | 0 | 8 | 4.00 | 4.00 | 4.00 | 4.64 | 4.04 | 4.33 | 4.64 | | | | | |
| Examinations covered the important aspects of the course. | | | | | | | | | | | | | | | | | | |
| 365 | 10 | 8 | 1 | 1 | 0 | 0 | 4.50 | 4.00 | 4.25 | 4.61 | 4.00 | 4.25 | 4.61 | | | | | |
| Grades were assigned fairly and impartially. | | | | | | | | | | | | | | | | | | |
| 366 | 11 | 6 | 3 | 0 | 0 | 0 | 4.59 | 4.07 | 4.40 | 4.67 | 4.07 | 4.40 | 4.67 | | | | | |
| The grading system was clearly explained. | | | | | | | | | | | | | | | | | | |

Written Comments

900 Comment on the quality of instruction in this course.

Student 1

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Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 002

NA

Student 2

Pat and Darden did a great job including a bunch of interesting topics into the class. However, I felt that a lot of times, things were rushed in lecture and I left feeling overwhelmed. In lecture a lot of terms and allusions were to advanced topics I felt like, which would greatly anyone who wasn't taking or passed 281 and 370. Especially when going through code walkthroughs, it seemed like things went really fast as though we were already supposed to understand python etc. Also, when going through steps in the homework that use commands or give directions that people are just supposed to follow but don't necessarily understand is a little counterintuitive and just confuses people even more.

Student 3

NA

Student 4

NA

Student 5

NA

Student 6

NA

Student 7

NA

Student 8

NA

Student 9

NA

Student 10

NA

Student 11

Good course, recommended to all

Student 12

I liked the professors, and I thought that the material was helpful! Although the material seemed a little dull at points. Pat and Darden kept my interest about 90% of the time, which - lets get real - is pretty impressive. :D

Student 13

very impressive

Student 14

NA

Student 15

I wish that I had taken this class alongside eeecs 183 rather than as a senior as it was super helpful

Student 16

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Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 002
NA

Student 17
I liked all of the instructors, but felt as though they did not do a good job at explaining concepts complex to me as a CS student in a relatively short period of time. Moved way too fast.

Student 18
NA

Student 19
NA

Student 20
NA

Written Comments

911 Please comment on the quality of the course as a whole.

Student 1
NA

Student 2
There was too much work in terms of advanced homework, and I felt like homework was graded pretty harshly.

Student 3
NA

Student 4
NA

Student 5
NA

Student 6
NA

Student 7
NA

Student 8
NA

Student 9
NA

Student 10
NA



Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 002

Student 11
Very quality, choice class. It was the pistol in the wild west that is the EECS department.

Student 12
I'm actually a senior, and although many of the topics, I had picked up from other classes or on my own already. I think that this class seems really useful to younger students.

Student 13
fun overall, helpful

Student 14
NA

Student 15
great course, would recommend

Student 16
NA

Student 17
Overall I enjoyed it but it also was way too much work for the credit being received

Student 18
NA

Student 19
NA

Student 20
NA

Written Comments

931 Please give any other comments on this course as a whole.

Student 1
NA

Student 2
would've liked to explore more linux secrets/commands. Don't assume students know different languages/commands or are able to pick them up super quickly from class demos. I feel like many of the demos left a lot of people in the dust. Skimming or alluding to advanced topics without fully explaining them is also very confusing, probably even more so for those who are taking 281 or haven't taken it. I remember a bunch of times hash tables and other data structures were mentioned that anyone who was just taking 280 would not have understood, and I feel like that would just confuse them and make them feel sort of inadequate or something

Student 3
NA

Student 4
NA



Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 002

Student 5
NA

Student 6
NA

Student 7
NA

Student 8
NA

Student 9
NA

Student 10
NA

Student 11
Great instructors

Student 12
I thought it was a well run and organized course. I enjoyed doing the homeworks because I felt like I was learning important things. I was a little salty about having to do the advanced homeworks, but requiring us to do only 3 a semester was a good plan that spread work out well and still taught me more in-depth, important things.

Student 13
n/a

Student 14
NA

Student 15
there's way more than I credit of work associated with hw

Student 16
NA

Student 17
Nothing else to say really

Student 18
NA

Student 19
NA

Student 20
NA



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Fall 2016 Final
20 students responded out of the total enrolled 68

Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 002

Written Comments

1098 Among the courses you have already taken, which proved the most (or least) effective in preparing you for this course, and why?

Student 1
NA

Student 2
280 - programming fundamentals helped with homework

Student 3
NA

Student 4
NA

Student 5
NA

Student 6
NA

Student 7
NA

Student 8
NA

Student 9
NA

Student 10
NA

Student 11
EECS 280

Student 12
NA

Student 13
280, 281, 485

Student 14
NA

Student 15

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Fall 2016 Final
20 students responded out of the total enrolled 68

Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William

EECS 398 002

eeecs 281

Student 16

NA

Student 17

Probably EECS 280/281 because of the command line experience they gave me

Student 18

NA

Student 19

NA

Student 20

NA

* The quartiles are calculated from Fall 2016 data. The university-wide quartiles are based on all UM classes in which an item was used. The school/college quartiles in this report are based on upper division classes with an enrollment of 16 to 74 students in College of Engineering.

** SA - Strongly Agree, A - Agree, N - Neutral, D - Disagree, SD - Strongly Disagree, NA - Not Applicable.



Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto, Patrick William
EECS 398 003

| | Responses from your Students** | | | | | | | | | | Your | | | University Wide | | | Other Users of This Item* | | |
|---|--------------------------------|----|---|---|----|----|--------|-------|-------|-------|-------|-------|-------|-----------------|-------|-------|---------------------------|--|--|
| | 5 | 4 | 3 | 2 | 1 | NA | Median | 75% | 50% | 25% | 75% | 50% | 25% | 75% | 50% | 25% | | | |
| | SA | A | N | D | SD | | | Above | Above | Above | Above | Above | Above | Above | Above | Above | | | |
| 4 | 11 | 9 | 4 | 0 | 0 | 0 | 4.39 | 3.75 | 4.19 | 4.64 | 3.67 | 4.06 | 4.41 | | | | | | |
| 891 | 3 | 7 | 7 | 5 | 2 | 0 | 3.21 | 2.83 | 3.13 | 3.42 | | | | | | | | | |
| I had a strong desire to take this course. | | | | | | | | | | | | | | | | | | | |
| As compared with other courses of equal credit, the workload for this course was (SA=Much Lighter, A=Lighter, N=Typical, D=Heavier, SD=Much Heavier). | | | | | | | | | | | | | | | | | | | |
| 1631 | 8 | 15 | 0 | 0 | 0 | 0 | 4.27 | 4.10 | 4.41 | 4.75 | | | | | | | | | |
| This course advanced my understanding of the subject matter. | | | | | | | | | | | | | | | | | | | |
| 1632 | 9 | 8 | 5 | 1 | 0 | 0 | 4.19 | 3.75 | 4.19 | 4.63 | | | | | | | | | |
| My interest in the subject has increased because of this course. | | | | | | | | | | | | | | | | | | | |
| 1633 | 9 | 13 | 2 | 0 | 0 | 0 | 4.27 | 4.00 | 4.33 | 4.67 | | | | | | | | | |
| I knew what was expected of me in this course. (SA=Almost Always, A=Frequently, N=Sometimes, D=Occasionally, SD=Hardly Ever). | | | | | | | | | | | | | | | | | | | |
| 230 | 16 | 5 | 0 | 0 | 0 | 0 | 4.84 | 4.50 | 4.80 | 4.92 | | | | | | | | | |
| The instructor seemed well prepared for class meetings. (SA=Almost Always, A=Frequently, N=Sometimes, D=Occasionally, SD=Hardly Ever) | | | | | | | | | | | | | | | | | | | |
| 199 | 16 | 5 | 0 | 0 | 0 | 0 | 4.84 | 4.25 | 4.67 | 4.86 | | | | | | | | | |
| The instructor explained material clearly. (SA=Almost Always, A=Frequently, N=Sometimes, D=Occasionally, SD=Hardly Ever) | | | | | | | | | | | | | | | | | | | |
| 217 | 15 | 5 | 1 | 0 | 0 | 0 | 4.80 | 4.69 | 4.86 | 4.95 | | | | | | | | | |
| The instructor treated students with respect. | | | | | | | | | | | | | | | | | | | |
| 1 | 10 | 11 | 2 | 0 | 0 | 0 | 4.36 | 3.88 | 4.31 | 4.71 | 3.83 | 4.11 | 4.41 | | | | | | |
| Overall, this was an excellent course. | | | | | | | | | | | | | | | | | | | |
| 2 | 17 | 4 | 0 | 0 | 0 | 0 | 4.88 | 4.33 | 4.73 | 4.90 | 4.16 | 4.54 | 4.70 | | | | | | |
| Overall, the instructor was an excellent teacher. | | | | | | | | | | | | | | | | | | | |
| 3 | 10 | 12 | 2 | 0 | 0 | 0 | 4.33 | 4.00 | 4.36 | 4.71 | 4.05 | 4.22 | 4.49 | | | | | | |
| I learned a great deal from this course. | | | | | | | | | | | | | | | | | | | |
| 61 | 6 | 12 | 1 | 1 | 0 | 4 | 4.17 | 4.03 | 4.26 | 4.53 | | | | | | | | | |
| Prerequisites provided adequate preparation for this course. | | | | | | | | | | | | | | | | | | | |
| 140 | 9 | 11 | 4 | 0 | 0 | 0 | 4.23 | 3.90 | 4.25 | 4.63 | | | | | | | | | |
| I deepened my interest in the subject matter of this course. | | | | | | | | | | | | | | | | | | | |
| 201 | 17 | 3 | 0 | 1 | 0 | 0 | 4.88 | 4.20 | 4.61 | 4.83 | | | | | | | | | |
| The instructor gave clear explanations. | | | | | | | | | | | | | | | | | | | |
| 203 | 17 | 4 | 0 | 0 | 0 | 0 | 4.88 | 4.33 | 4.67 | 4.85 | | | | | | | | | |
| The instructor stressed important points in lectures/discussions. | | | | | | | | | | | | | | | | | | | |
| 207 | 17 | 4 | 0 | 0 | 0 | 0 | 4.88 | 4.67 | 4.86 | 4.94 | | | | | | | | | |
| The instructor appeared to have a thorough knowledge of the subject. | | | | | | | | | | | | | | | | | | | |
| 216 | 17 | 4 | 0 | 0 | 0 | 0 | 4.88 | 4.50 | 4.73 | 4.88 | | | | | | | | | |
| The instructor acknowledged all questions insofar as possible. | | | | | | | | | | | | | | | | | | | |
| 218 | 15 | 5 | 1 | 0 | 0 | 0 | 4.80 | 4.33 | 4.67 | 4.83 | | | | | | | | | |
| The instructor encouraged constructive criticism. | | | | | | | | | | | | | | | | | | | |
| 228 | 14 | 6 | 1 | 0 | 0 | 0 | 4.75 | 4.19 | 4.50 | 4.73 | | | | | | | | | |
| The instructor followed an outline closely. | | | | | | | | | | | | | | | | | | | |
| 229 | 17 | 4 | 0 | 0 | 0 | 0 | 4.88 | 4.21 | 4.63 | 4.83 | | | | | | | | | |
| The instructor used class time well. | | | | | | | | | | | | | | | | | | | |
| 232 | 12 | 10 | 2 | 0 | 0 | 0 | 4.50 | 4.00 | 4.36 | 4.67 | | | | | | | | | |
| Work requirements and grading system were clear from the beginning. | | | | | | | | | | | | | | | | | | | |
| 239 | 8 | 6 | 5 | 3 | 2 | 0 | 3.83 | 3.94 | 4.20 | 4.50 | | | | | | | | | |
| The amount of work required was appropriate for the credit received. | | | | | | | | | | | | | | | | | | | |
| 240 | 7 | 16 | 1 | 0 | 0 | 0 | 4.19 | 4.00 | 4.25 | 4.56 | | | | | | | | | |
| The amount of material covered in the course was reasonable. | | | | | | | | | | | | | | | | | | | |
| 318 | 8 | 13 | 2 | 0 | 0 | 1 | 4.23 | 4.00 | 4.20 | 4.60 | | | | | | | | | |
| Writing assignments seemed carefully chosen. | | | | | | | | | | | | | | | | | | | |
| 340 | 3 | 4 | 1 | 0 | 2 | 14 | 4.00 | 3.33 | 4.00 | 4.50 | | | | | | | | | |
| The textbook made a valuable contribution to the course. | | | | | | | | | | | | | | | | | | | |
| 356 | 4 | 5 | 1 | 0 | 0 | 14 | 4.30 | 4.04 | 4.33 | 4.64 | | | | | | | | | |
| Examinations covered the important aspects of the course. | | | | | | | | | | | | | | | | | | | |
| 365 | 11 | 11 | 2 | 0 | 0 | 0 | 4.41 | 4.00 | 4.25 | 4.61 | | | | | | | | | |
| Grades were assigned fairly and impartially. | | | | | | | | | | | | | | | | | | | |
| 366 | 12 | 12 | 0 | 0 | 0 | 0 | 4.50 | 4.07 | 4.40 | 4.67 | | | | | | | | | |
| The grading system was clearly explained. | | | | | | | | | | | | | | | | | | | |

Written Comments

900 Comment on the quality of instruction in this course.

Student 1

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Fall 2016 Final
25 students responded out of the total enrolled 71

Instructor with Comments Report

2016-12-01 - 2016-12-14 Report ID: MSR04734

Instructor: Pannuto,Patrick William
EECS 398 003
NA

Student 2
All the instructors care about the material and about helping students become better equipped for programming.

Student 3
NA

Student 4
NA

Student 5
The instructors were very good

Student 6
NA

Student 7
NA

Student 8
I cannot even begin to describe how amazing both Pannuto and Darden are. In terms of their extreme enthusiastic for the students, words cannot be said. They are even open to giving advice outside the classroom. They truly set the bar for how professors should engage students in the classroom.

Student 9
Good lectures

Student 10
NA

Student 11
Passionate teachers, good lectures!

Student 12
NA

Student 13
NA

Student 14
I love this course. Every EECS student should take this class before 280. Awesome course, Awesome instruction.

Student 15
Great teachers! Very enthusiastic.

Student 16
NA



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Student 17
NA

Student 18
NA

Student 19
NA

Student 20
NA

Student 21
NA

Student 22
Pat and Dr. Darden were both really enthusiastic and great instructors for this class.

Student 23
NA

Student 24
NA

Student 25
NA

Written Comments

911 Please comment on the quality of the course as a whole.

Student 1

This course would have benefitted with a lab because it was hard to follow in lecture at times. better for asking questions as well.

Student 2

This course is invaluable for students who want to be in EECS but don't have the background that independent programmers come in with. Classes like this are what enable students who feel behind to enter classes at the same level as others with more experience. I really appreciate everyone who set up this course.

Student 3
NA

Student 4
NA

Student 5
NA

Student 6

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NA

Student 7

NA

Student 8

100%, 10 out of 10 would recommend any serious computer scientist who plans on improving his/her career in the field.

Student 9

Good

Student 10

NA

Student 11

Great course. So much useful information for anyone in CS

Student 12

NA

Student 13

NA

Student 14

Excellent. Professors are AWESOME!!!

Student 15

I learned a great deal about things that are not taught in traditional classes. These things improve my every day coding experience, so I appreciate the knowledge I gained from this class a lot.

Student 16

NA

Student 17

NA

Student 18

NA

Student 19

A lot of homework just for a 1 credit class...

Student 20

NA

Student 21

NA

Student 22

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I feel like the course tries to cover too many things and lectures were too fast paced at times

Student 23
NA

Student 24
NA

Student 25
NA

Written Comments

931 Please give any other comments on this course as a whole.

Student 1
NA

Student 2

I put more time into this course than was expected. Because what this class did was create space for students to learn on their own. As a student who has little experience in this area, I was able to take advantage of the resources and the space you made to learn and make mistakes.

Student 3
NA

Student 4
NA

Student 5

This course was way, way too much work for a one credit course. I understand that the work assigned was intended to help us learn the material, which it was effective in doing, but I dedicated significantly more time to this class than I did to a two credit EECS class I'm taking this semester, and almost as much time as some of the four credit classes I am taking. I liked the class and I am glad I took it, but this is not an appropriate workload for a one credit class.

Student 6
NA

Student 7
NA

Student 8
NA

Student 9

Homework can be more interesting and challenging. That's useful!

Student 10
NA



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Student 11
NA

Student 12
NA

Student 13
NA

Student 14
I love the lectures by both professors. The lectures and vibe of the class is what all classes should be.

The assignments were too difficult for a one credit class and could use better instruction. An online walkthrough would be greatly appreciated.

It was difficult to apply everything, because I use an older mac. i know this is a special case, but I could not get the VM machine to work. Having parallel options for the course would have been extremely helpful.

Overall, this course is a personal favorite!! EXCELLENT!!!

Student 15
I encourage others to take it!

Student 16
NA

Student 17
NA

Student 18
NA

Student 19
NA

Student 20
NA

Student 21
NA

Student 22
NA

Student 23
NA

Student 24
NA



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Student 25

NA

Written Comments

1098 Among the courses you have already taken, which proved the most (or least) effective in preparing you for this course, and why?

Student 1

NA

Student 2

ENGR101, EECS280, and EECS370 were most helpful in giving me coding background and practice which was my context for this course.

Student 3

NA

Student 4

NA

Student 5

NA

Student 6

NA

Student 7

NA

Student 8

All are quite effective in preparing for this course, but it seems you could take this course after ENGR101.

Student 9

NA

Student 10

NA

Student 11

NA

Student 12

NA

Student 13

NA

Student 14

I believe this was an amazing course with so much value, I think this should be the intro course.

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Student 15
N/A

Student 16
NA

Student 17
NA

Student 18
NA

Student 19
N/A

Student 20
NA

Student 21
NA

Student 22
NA

Student 23
NA

Student 24
NA

Student 25
NA

* The quartiles are calculated from Fall 2016 data. The university-wide quartiles are based on all UM classes in which an item was used. The school/college quartiles in this report are based on upper division classes with an enrollment of 75 to 9999 students in College of Engineering.

** SA - Strongly Agree, A - Agree, N - Neutral, D - Disagree, SD - Strongly Disagree, NA - Not Applicable.