#### CS 4102-002 Algorithms - Spring 2019

ENGR (16853)

INSTRUCTORS: Hott, John (jh2jf) Respondents: 71 / Enrollment: 138

#### Summary: CS 4102-002 Algorithms - Spring 2019 (16853)

#### **Overall Course Rating**

CS-4102-002 Mean 4.21 CS-4102-002 Std Dev 0.89 CS-4102-002 Response Count 354

SEAS, 4000-level courses Mean 4.16 SEAS, 4000-level courses Std Dev 0.95 SEAS, 4000-level courses Response Count 10864

#### **Overall Instructor Rating**

INSTRUCTOR: Hott, John Mean 4.50 Std Dev 0.67 Response Count 495

SEAS, 4000-level courses Mean 4.32 SEAS, 4000-level courses Std Dev 0.88 SEAS, 4000-level courses Response Count 15537

#### ~ QUESTIONS AND DETAILS ~

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

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

~ ANSWER MATRIC	ES ~
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Results for	Results for CS-4102-002											
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)				
71	4.55	0.58	42 (59.15%)	26 (36.62%)	3 (4.23%)	0 (0.00%)	0 (0.00%)	0 (0.00%)				

Results for SEAS, 4000-level courses									
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	
2169	4.37	0.77	1079 (49.75%)	861 (39.70%)	147 (6.78%)	47 (2.17%)	16 (0.74%)	19 (0.88%)	

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

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for	Results for CS-4102-002, Hott, John										
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)			
71	4.44	0.73	38 (53.52%)	29 (40.85%)	1 (1.41%)	3 (4.23%)	0 (0.00%)	0 (0.00%)			

Results for	Results for SEAS, 4000-level courses											
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)				
2225	4.21	0.97	1034 (46.47%)	721 (32.40%)	219 (9.84%)	126 (5.66%)	38 (1.71%)	87 (3.91%)				

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

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for	CS-4102-0	02						
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
71	4.24	0.92	32 (45.07%)	31 (43.66%)	2 (2.82%)	5 (7.04%)	1 (1.41%)	0 (0.00%)

Results for SEAS, 4000-level courses										
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)		
2175	4.24	0.92	991 (45.56%)	908 (41.75%)	134 (6.16%)	80 (3.68%)	59 (2.71%)	3 (0.14%)		

Not

Applicable

(NA)

(0.00%)

Not

Applicable

(NA) 180

(8.29%)

Not

Applicable

(NA)

(15.49%)

Not Applicable

(NA)

1084

(49.82%)

Not

Applicable

(NA)

(0.00%)

Not

Applicable

(NA)

(3.16%)

Not

Applicable

(NA)

(0.00%)

Applicable (NA)

(1.04%)

#### ~ QUESTIONS AND DETAILS ~ ~ ANSWER MATRICES ~ 4. The homework assignments helped Results for CS-4102-002 me learn the subject matter. Std Dev Agree (4) Total Mean Strongly Neutral Disagree Strongly Agree (5) (2)Disagree (3)Question Type: Likert (1) 70 4.47 0.70 40 24 5 contributed by Dean of the School of Engineering (34.29%) (7.14%)(1.43%)(57.14%)(0.00%)and Applied Science Results for SEAS, 4000-level courses Disagree (2) Mean Std Dev Strongly Agree (4) Total Neutral Strongly Disagree (1) Agree (5) (3) 2170 0.95 847 786 212 37 4 15 108 (9.77%) (1.71%) (39.03%)(36.22%) (4.98%)5. The textbook increased my Results for CS-4102-002 understanding of the material. Agree (4) Total Mean Std Dev Strongly Neutral Disagree Strongly Agree (5) Disagree (1) (3) (2)Question Type: Likert 71 3.58 1.00 26 16 contributed by Dean of the School of Engineering (18.31%)(22.54%)(36.62%)(4.23%) (2.82%)and Applied Science Results for SEAS, 4000-level courses Strongly Agree (5) Agree (4) Disagree (2) Mean Std Dev Strongly Disagree Total Neutral (3)(1) 2176 3.81 1.07 354 334 284 36 (16.27%) (15.35%)(13.05%)(3.86%)(1.65%)6. The course material was well Results for CS-4102-002. Hott. John organized and developed. Total Mean Std Dev Strongly Agree (4) Neutral Disagree (2) Strongly Disagree (1) Agree (5) (3) Question Type: Likert 0 (0.00%) 69 4.51 0.63 39 27 contributed by Dean of the School of Engineering (1.45%) (56.52%) (39.13%) (2.90%)and Applied Science Results for SEAS, 4000-level courses Agree (4) Std Dev Total Mean Strongly Neutral Disagree Strongly Agree (5) (3) Disagree (1) 2217 4.07 1.03 888 791 260 61 (40.05%)(35.68%)(11.73%)(6.63%)(2.75%)7. The instructor was knowledgeable Results for CS-4102-002, Hott, John about the subject matter. Std Dev Strongly Disagree (2) Total Mean Neutral Agree (4) Strongly Disagree (1) Agree (5) (3) Question Type: Likert 71 4.62 0.59 48 19 n contributed by Dean of the School of Engineering (67.61%) (26.76%) (5.63%) (0.00%) (0.00%)and Applied Science Results for SEAS, 4000-level courses Disagree (2) Agree (4) Total Mean Std Dev Strongly Neutral Strongly Agree (5) Disagree (1) (3) 2222 4.55 0.69 1397 648 122 (0.90%)(0.54%)(62.87%)(29.16%)(5.49%)8. The instructor was well prepared for class.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for	Results for CS-4102-002, Hott, John										
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)			
71	4.65	0.51	47 (66.20%)	23 (32.39%)	1 (1.41%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			

Results for SEAS, 4000-level courses									
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	
2221	4.36	0.85	1167 (52.54%)	734 (33.05%)	173 (7.79%)	64 (2.88%)	27 (1.22%)	56 (2.52%)	

#### ~ QUESTIONS AND DETAILS ~

#### ~ ANSWER MATRICES ~

#### 9. I received adequate preparation from the prior courses in the curriculum to be successful in this course.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for	CS-4102-0	02						
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
71	4.11	0.92	29 (40.85%)	26 (36.62%)	11 (15.49%)	5 (7.04%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
2174	4.04	1.01	785 (36.11%)	813 (37.40%)	283 (13.02%)	124 (5.70%)	58 (2.67%)	111 (5.11%)

#### 10. The grading policy was fair.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for	CS-4102-0	02, Hott, Jo	hn					
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
71	4.35	0.79	36 (50.70%)	27 (38.03%)	5 (7.04%)	3 (4.23%)	0 (0.00%)	0 (0.00%)

Results for	Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	
2217	4.29	0.86	1063 (47.95%)	829 (37.39%)	192 (8.66%)	78 (3.52%)	25 (1.13%)	30 (1.35%)	

## 11. The instructor responded adequately to in-class questions.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4102-002, Hott, John									
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	
71	4.48	0.65	39 (54.93%)	28 (39.44%)	3 (4.23%)	1 (1.41%)	0 (0.00%)	0 (0.00%)	

Results for	Results for SEAS, 4000-level courses								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	
2219	4.39	0.81	1175 (52.95%)	782 (35.24%)	134 (6.04%)	51 (2.30%)	28 (1.26%)	49 (2.21%)	

# 12. The instructor effectively used technology in support of the learning goals for this course.

Question Type: Likert

contributed by Dean of the School of Engineering and Applied Science

Results for CS-4102-002, Hott, John								
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)
71	4.44	0.69	38 (53.52%)	27 (38.03%)	5 (7.04%)	1 (1.41%)	0 (0.00%)	0 (0.00%)

Results for SEAS, 4000-level courses									
Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Not Applicable (NA)	
2216	4.33	0.83	1074 (48.47%)	795 (35.88%)	183 (8.26%)	51 (2.30%)	26 (1.17%)	87 (3.93%)	

## 13. The average number of hours per week I spent outside of class preparing for this course was:

Question Type: Multiple Choice

contributed by Office of the Provost

Results for CS-4	102-002				
Total	Less than 1	1 - 3	4 - 6	7 - 9	10 or more
	(NA)	(NA)	(NA)	(NA)	(NA)
71	1	3	35	24	8
	(1.41%)	(4.23%)	(49.30%)	(33.80%)	(11.27%)

Results for SEA	S, 4000-level cours	ses			
Total	Less than 1	1 - 3	4 - 6	7 - 9	10 or more
	(NA)	(NA)	(NA)	(NA)	(NA)
2174	85	759	887	261	182
	(3.91%)	(34.91%)	(40.80%)	(12.01%)	(8.37%)

~ QUESTIONS AND DETAILS ~				~ ANSWER	MATRICES ~			
14. I learned a great deal in this course.	Results for	CS-4102-002	)					
Question Type: Likert	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
contributed by Office of the Provost	71	4.46	0.77	42 (59.15%)	23 (32.39%)	3 (4.23%)	3 (4.23%)	0 (0.00%)
	Results for	SEAS. 4000-	level courses					
	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	2172	4.16	0.93	927 (42.68%)	855 (39.36%)	246 (11.33%)	106 (4.88%)	38 (1.75%)
15. Overall, this was a worthwhile	Results for	CS-4102-002	2					
course. ~ Question Type: Likert	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
contributed by Office of the Provost	71	4.44	0.79	41 (57.75%)	23 (32.39%)	4 (5.63%)	3 (4.23%)	0 (0.00%)
	Results for	SEAS, 4000-	level courses					
	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	2165	4.13	1.01	953 (44.02%)	786 (36.30%)	253 (11.69%)	107 (4.94%)	66 (3.05%)
6. The course's goals and requirements	Results for	CS-4102-002	2, Hott, John					
were defined and adhered to by the instructor.	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
Question Type: Likert	70	4.46	0.58	35 (50.00%)	32 (45.71%)	3 (4.29%)	0 (0.00%)	0 (0.00%)
	Results for	SEAS, 4000-	level courses					
	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	2214	4.34	0.80	1082 (48.87%)	900 (40.65%)	144 (6.50%)	68 (3.07%)	20 (0.90%)
17. The instructor was approachable	Results for	CS-4102-002	2, Hott, John					
and made himself/herself available to students outside the classroom.	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
Question Type: Likert	71	4.58	0.69	46 (64.79%)	22 (30.99%)	2 (2.82%)	0 (0.00%)	1 (1.41%)
	Results for	SEAS, 4000-	level courses					
	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	2220	4.39	0.83	1229 (55.36%)	737 (33.20%)	169 (7.61%)	61 (2.75%)	24 (1.08%)
18. Overall, the instructor was an	Results for	CS-4102-002	2, Hott, John					
effective teacher. ~ Question Type: Likert	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
contributed by Office of the Provost	71	4.51	0.69	42 (59.15%)	25 (35.21%)	2 (2.82%)	2 (2.82%)	0 (0.00%)
	Results for	SEAS, 4000-	level courses					
	Total	Mean	Std Dev	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
	2226	4.24	0.95	1097 (49.28%)	777 (34.91%)	203 (9.12%)	98 (4.40%)	51 (2.29%)

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~ QUESTIONS AND DETAILS ~		~ ANSWER MATRICES ~
19. Please make any overall comments	Results for CS-4	1102-002
or observations about this course:	Total	Individual Answers
Question Type: Short Answer	39	See below for Individual Results
contributed by Office of the Provost		
	This course wa We talked in cla without hints or don't think I cou like I worked re the final yet), bi	s. I learned a lot and Professor Hott was super nice and understanding.  s great, but the HWs were REALLY hard to do and the collaboration policy is fuzzy.  ass today about how it is difficult to maneuver it, but they were almost impossible  straight up answers from TAs or the Profs or looking up similar questions online. I  uld have done any of the homeworks intuitively by myself. I read the textbook and I feel ally hard in this class and even got a near perfect score on the midterm(havent taken  ut I wish there was something else I could do to have made myself understand the

Great class, great professor

John Hott was a genuinely kind person.

Very well structured course. It was designed to help students learn as much as possible, and I enjoyed the material and felt like I learned quite a bit.

homework intuitively and not take 10 more hours to do than it took everyone else.

Taking a course with Professor Hott has been wonderful! He's such a great professor! I went to his office hours and he spent an hour explaining one problem. Hott is very, very patient and I'm super appreciative of that. Professor Hott's slides are organized and concise. All the relevant information is there which makes it easy to catch up on missed lectures. The content of his course is very engaging. Algorithms can be a boring subject, but Hott introduces complex problems in class which makes it fun to follow along with. I thoroughly enjoyed the homework assignments although they were VERY difficult. It was nice to collaborate with my friends. We actually had some fun doing the assignments. The only complaints I have about the course is the inconsistency of the grading style for the homework assignments. Some of my friends would receive full points for a problem we worked on together and I received few points (and vice versa). It's evident that some TAs grade harsher than others. Overall, I really enjoyed this course.

I'm blown away by Prof. Hott's kindness and enthusiasm. He's a great teacher and I had a really good time this semester. A small request: Please have more test cases for the programming assignments.

While this course was interesting, it often felt very disconnected from the topics I had studied in the rest of my CS classes. Further, the lectures did not prepare us to complete the homework at all, which meant that a homework that I felt should have taken 2-3 hours often took 6-7 hours because I had to teach myself the entire method for solving a problem and then figure out how to actually apply it to the problem.

Hott is a great professor, that being said, the class is SOO hard because we have big homeowrks that no one really knows how to do. We should have a small assignment each class that makes sure you learned 1 concept from that day and then the big homeworks.

Professor Hott is a wonderful professor who cares about his students. He also is a great lecturer. Overall, an amazing class. While at some points I truly felt that developing these algorithms were out of my league, the exposure was enough to make me realize how fundamental this course is to developing CS intuition.

I was barely prepared to take this course. I was enrolled in CS2102 last semester and easily received an A. However, when I got to CS4102 I was expected to be able to hand write proofs and if I had not had freinds who had taken CS2102 with Edwards (left UVA last year) i would've had no idea how to do this. This is more a critism at CS2102 than at CS4102.

Although I hated discrete math and theory of computation, this class was one of my favorites I have taken as a CS major. The homeworks are super interesting and applicable. I was a little worried coming in because the course description said this was the more mathematically rigorous section but my fears were quickly vanquished after experiencing your teaching. Thank you Professor Hott and please keep teaching this class for the sake of younger students!

John Hott is an amazing Professor, very knowledgable and passionate about the course subject. He is always willing to help students understand and he is upfront about how hard this course is. He really explains topics well in class as well. However, sometimes he gets too caught up in the proof of problems. But besides that, he explains concepts in a way such that us students can easily understand. Great professor for a very challenging course.

This was a fantastic class. In my opinion, this class should be a requirement of the Computer Science minor due to this being a foundation of CS thinking. This class is one my most valuable CS experiences and I am sincerely glad to have taken it before graduation.

if you are going to ask for students to raise their hands if they understand, actually do something with the response. many times, no one would raise their hands, and he would still move on. us not raising our hands means we don't understand so you should stop and go back instead of just ignoring the response

#### ~ QUESTIONS AND DETAILS ~

#### ~ ANSWER MATRICES ~

Great class! It starts off a bit slow, but the pace is good for the second half of class when things start to get confusing. Professor Hott is very patient and has good slides. Only critique is that near the end of the semester, the homework assignments are a bit tight, which is stressful and not great for my understanding. I would recommend putting earlier homeworks closer together so there is more time for later homeworks

Professor Hott was an amazing teacher!! One of the best CS teachers I've had yet. He is down-toearth and really cares about his students well-being and education. He knows what he's talking about and makes the material interesting. Really grateful for him. One of the best CS classes I have taken. Very worthwhile

You're the man Hott. Thanks for a great course.

Hott literally uses Brunelle's lecture slides and even uses his jokes. The best way for me to learn was to watch Hott's lectures at double speed on Panopto because he goes so slow. He spends like half of each lecture repeating what was covered last lecture. We wasted classes upon classes talking about quick sort and then I just looked up a 5 minute youtube video about quick sort and understood it immediately. We wasted so much time and went so slow this semester. The subject matter of algo is interesting but we did it so slowly that it was extremely boring. If we went faster and covered more content it would have been a good class. I felt like I could've learned what we learned in this whole semester if I watched two hour long youtube summary videos.

Very challenging and intensive course taught by a very knowledgable and prepared professor.

Interesting class with a mathematical approach to the analysis of algorithms. Some of the written homeworks were a bit boring to work through (being more formal math than devising algorithms) but the programming homeworks were genuinely fun to implement. Also Hott is a sweetheart and a great professor, I would definitely recommend taking this course with him.

Enjoyed this course, I think it will be very helpful for me in the future!

Great teacher/class

Really good lecturer with a sense of humor

N/A

Very good class! I really believe that Prof Hott (the algorithm king) did a great job at teaching this class, and I really appreicate the help from both Hott and the TA's at Office Hours.

The homeworks were graded more harshly than was warranted especially given the lax grading in the other algorithms class.

Great Professor. During his office hours, he was approachable and patient. I enjoyed the learning this material in the class. At times the homework assignments were very difficult to do in the time given. Preferred if there was a better grading. It was extremely difficult at the end of the semester when we had homework assignments consecutively for the past three weeks.

The lectures were my favorite part of the class. Professor Hott did an excellent job creating slides and animations the clearly explained the concepts.

Professor Hott is awesome!

Hott is one of the best professors I have ever had. He understands the material unbelievably well, and he is unbelievably smart. He cares so much about his students, and he wont stop explaining something until you get it. This man deserves a raise and an award. Incredible guy.

In coding assignments, maybe provide more edge cases for testing, and put more weight on exams.

The slides are great!!!!!! Professor Hott is so well-prepared for each class.

Definitely my favorite class that I have taken this entire semester. I really liked having Professor Hott and I told all of my friends to take his section of algorithms. I really like theoretical CS and the way that Professor Hott teaches the course materials is very interesting. Yes, this class is difficult, but I have learned a lot and the topics are very interesting. Additionally, there were also some scheduling problems (with missed class and the homeworks), but Professor Hott has handled this issues as well as he could. Overall, an amazing class that will only get better as Professor Hott keeps teaching it.

great class. Lover it!

This class was fun, unexpected for a CS class. You really made this class special

Great class and I learned a ton. Only problem is that I thought the online grading was a little finicky at times.

Hott is very friendly professor and makes it clear he cares about his students!

Very good class