The Role of Community in Computer Science Education

In 2014, I hopped on a plane to leave the country for the first time. Over the next six months, I lived as a foreign exchange student in Manchester, England where I grappled with being an outsider. This experience taught me that it is very challenging to learn without a sense of community. As a result, **my primary goal as an educator is to create that sense of community for my computer science students**.

That said, creating a sense of community in the classroom is easier said than done. I believe that part of building that sense of community must start before students ever enter the classroom. For me, that meant gaining an appreciation for the diversity of students that I could be teaching. For example, I took a Teaching English as a Foreign Language (TEFL) course and ultimately earned my 200-hour TEFL certification. As a result, I am better prepared to support students with English as their second language and ultimately help them feel included in the classroom.

While many of my efforts to build community start with international students, the work does not stop there. For example, once I have students in the classroom, I make sure that I always learn their names. My process for learning names usually involves a combination of getting to know students one-on-one in a lab setting while also asking students to create nametags. These nametags are especially useful for getting to know student pronouns as well as helping students get to know each other—furthering my efforts to build community.

As the semester gets going, I like to have a place for my students to discuss problems they are having with their peers. My current approach has been to create a Discord server (i.e., a chatting platform like GroupMe or WhatsApp) for students to interact with each other as well as their graders and me. To further aid in community building, I ask that students share their names and pronouns on their profiles.

While learning student names and pronouns and creating online spaces for students to interact are great ways to build community, I find that much of the community building happens with intentional effort in the classroom. There are many ways to build community in the classroom, but my main strategy is to subvert the traditional role of the educator. In other words, rather than spending the majority of class time lecturing, I prioritize activities that center the students.

One of my favorite activities for centering students is **Think-Pair-Share**. With Think-Pair-Share, I can pose a question or challenge to students and ask them to silently think about the answer. After some time, I ask the students to discuss their thoughts in pairs as a means of building community. Early in the semester, I also use this time to have students share information about themselves as a way of getting to know each other. Finally, I ask that the pairs report out on their thoughts. Overall, I find Think-Pair-Share to be very effective for getting students to genuinely discuss course content while simultaneously helping students meet their peers.

In addition to Think-Pair-Share, I am also a strong proponent of **Peer Instruction** for building community. Like Think-Pair-Share, Peer Instruction starts by posing a question—in this case, a multiple-choice question. Students are asked to silently select an answer. Once enough students have had a chance to answer the question, students are asked to pair up and discuss their thoughts. After a short discussion, students are asked to answer the same question again. With this approach, I find that not only do students score better after discussion, but students also have a better understanding of the concept after they have had a chance to debate their thoughts with a peer. Likewise, those discussions serve as another way to build community in the classroom.

One of the problems with Think-Pair-Share and Peer Instruction is that the groups of students are usually static. Specifically, students tend to sit in the same places throughout the classroom, so discussions are often conducted with the same peers. As a result, I like to mix in a third activity known as **Jigsaw**. In a

Jigsaw, students are asked to form small groups for discussion. Once students have selected their groups, students are asked to assign experts to a list of topics. Specifically, each student in the group will be assigned to a different topic. Then, students are asked to group up with their fellow experts which will likely include folks that they do not talk to very often. I find this very effective for furthering my efforts in building community as students have a chance to branch out of their small friend groups. After the expert groups have had a chance to discuss their topic, students are asked to regroup with their original groups. At that point, students are asked to share their expertise with their peers. Overall, I find Jigsaw helpful for building out community study guides and other resources that can be shared with the class.

Though Think-Pair-Share, Peer Instruction, and Jigsaw are great ways of building community through instruction, community can break down quickly during assessment. As a result, I find it important to ensure that students, graders, and myself are all on the same page as it comes to grading. To do that, I have introduced rubrics to my teaching. I find these rubrics reinforce my efforts to build community because they add transparency and trust to the classroom. If students know how they will be assessed, they can be confident their work will be appreciated.

While many of my efforts to build community happen with current students, I believe it is important to continue to maintain student relationships beyond the semester I have them in class. As a result, I make a conscious effort to reach out to one previous student a week to see how they are doing and how I can continue to support them. To me, this is the end goal of community building where students feel that can continue to connect with their peers and educators far beyond the scope of a semester or course. In my experience, previous students have had a positive reaction to me reaching out, and I suspect this helps them maintain a positive view of the computer science community.

Up to this point, I have talked about several techniques for building community with previous and current students. Unfortunately, despite my best efforts to ensure that students have peers to lean on, there are always going to be students that slip through the cracks. As a result, another one of my attempts to build community is to work one-on-one with students that do not appear to be meshing well with their community. These types of students can be identified in a variety of ways. For example, students that miss a lot of class or self-isolate in the classroom are likely to be missing those opportunities to be a part of their community. Ultimately, I believe it is my responsibility to find ways to integrate these students in the community on a one-on-one basis.

Previously, I had a student who was self-isolating in the lab. However, despite not engaging with the class, they were often very comfortable talking to me one-on-one. At one point, they had mentioned to me that they appreciated the chance to work with other students, but they often felt less smart than their peers. After having a chance to discuss this feeling with them, I mentioned that there is a lot of posturing that occurs in engineering. In other words, it is likely that the student knew the material as well as their peers, but their peers felt that they had to appear smart to gain or maintain social status. As a result, the student gained the confidence to reintegrate with their community.

Ultimately, while it has been a considerable amount of time since I felt isolated like my student, I am still motivated to ensure none of my students feel the same way. My hope is that enough students will appreciate my efforts to build community that they will go on to do the same in their careers. Perhaps over time, we will see spaces in computer science that are more inclusive and collaborative. Until then, I must continue to do my part to ensure students feel a sense of community in my classroom.

The Ohio State University Teaching Responsibilities

Sorted by Highest Authority

Instructor of Record, *Software Components* (CSE 2221), The Ohio State University (Autumn 2019, Spring 2020, Autumn 2021, Spring 2022)

Software Components is a second-year programming course for students interested in getting into either the computer science and engineering major or the data analytics major. In both semesters, I had roughly 40 students who met me for two lectures and two labs a week. In terms of content, the course focuses on good software design principles including testing and readability while also giving students a foundation on data structures and recursion. As the instructor, I completed the following responsibilities:

- Held two 55-minute lectures and two 55-minute labs a week
- Provided support through 2-3 office hours a week
- Administered and graded all three exams (two midterms and a final)
- Managed two undergraduate teaching assistants who graded all assignments and supported me in the labs

For this course, I also modified the provided lesson plans to include my own examples as well as activities like Think-Pair-Share, peer instruction, and jigsaw. In general, I tried to include at least two activities per lecture. Likewise, I created rubrics and checklists for all assignments and collected feedback about each individual assignment for the purposes of improving them for future courses.

Instructor of Record, *Introduction to Computer Programming in Java* (CSE 1223), The Ohio State University (Autumn 2018, Spring 2019)

Introduction to Computer Programming in Java is a programming course open to any student on campus, including freshman, seniors, and even grad students. In general, the course featured 40 students from various backgrounds as it is often used to fulfill requirements in various departments. For instance, I had students from the following departments:

- Finance
- Journalism
- Biomedical Engineering
- Mathematics
- Industrial and Systems Engineering
- Information Systems
- Statistics

In terms of content, the course covers largely introductory concepts like syntax and basic data structures. As the instructor, I completed the following responsibilities:

- Held two 55-minute lectures and one lab a week
- Provided support through 2-3 office hours a week
- Administered, graded, and provided feedback on all assignments and exams

For this course, I also automated some of my grading responsibilities using Python to test student solutions to assignments. This gave me more time to provide thorough and constructive feedback on all assignments.

Graduate Teaching Assistant, *Software Components* (CSE 2221), The Ohio State University (Summer 2019)

In the summer before I took on Software Components as the instructor of record, I trained for the course as a teaching assistant. As a result, I completed the following responsibilities:

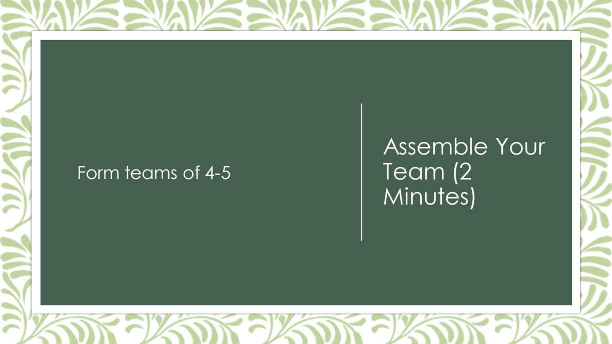
- Graded and provided feedback on 6 of the 11 programming projects
- Attended every lecture to gain insight in teaching of the course material
- Completed every project for feedback by the course coordinator
- Met weekly with the course coordinator to discuss weekly lesson plans
- Provided support in 2-3 labs a week

In addition, I also built up a portfolio of grading samples, so I had something to train my future undergraduate teaching assistants.

STACK API JIGSAW

A team-based activity

1



Form teams of 4-5

Assemble Your Team (2 Minutes)

2

Study Guide Setup (5 Minutes)

1. Go to Carmen and the Software Components course
2. Go to the Collaborations tab
3. Create a Word document and share it with your team
4. Share it with ME as well!

3

Jigsaw Prep (10 Minutes)

- Spend some time looking at the slides for today
- Make sure your team understands the following concepts:
  - The Stack Data Structure
  - Stack Constructors

4

- Topics [**Note the #**]
  1. push(), pop()
  2. length(), top()
  3. replaceTop(), flip()

Assign Experts (3 minutes)

5

Front of Class

Ones

Twos

Threes

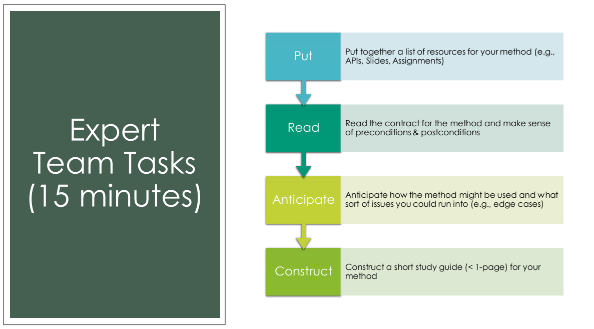
Join Up With Your Experts (3 Minutes)

6

Split Expert Teams (2 minutes)

- These expert teams are very large
- Find a way to split your expert team into smaller groups (<=5 people)

7



Expert Team Tasks (15 minutes)

Put — Put together a list of resources for your method (e.g., APIs, Slides, Assignments)

Read — Read the contract for the method and make sense of preconditions & postconditions

Anticipate — Anticipate how the method might be used and what sort of issues you could run into (e.g., edge cases)

Construct — Construct a short study guide (< 1-page) for your method

8

Dissemination (15 minutes)

- Take turns reporting out to your team about your study guide
  - Use 3-4 minutes per person for reporting out
  - Use 1-2 minutes for questions

9

Questions?

10

Instructional Artifact – Jigsaw

In the education space, jigsaw is a teaching technique which gets students to become an expert in a small topic, which they can teach to their peers. Specifically, I use a form of jigsaw which follows a strict process:

1. Ask students to form teams
2. Instruct teams to assign experts to a set of mutually exclusive topics
3. Divide teams into expert teams, where expert teams will focus on a topic
4. Return students to their original teams, where they will teach their peers about their topic

Here, I provide an example of one of my jigsaw sessions as a set of slides. In this session, I ask students to learn about a computer science topic known as the stack. Specifically, the goal of the session is to get students to familiar with how to use the stack when they write code. Typically, this type of subject would be taught in a lecture format where examples of how to use the stack would be provided. Instead, I opt for a more community-based approach where students learn to take responsibility for their learning and the learning of their peers. In this case, I ask the expert teams to focus on a subset of items related to the stack. These items are meticulously selected to ensure that there is no overlap between expert teams.

One of the expected outputs of an activity like this is a study guide, which students can use in addition to the materials provided in class to study for exams. As a result, a major focus of the expert teams is to construct an expert study guide. These study guides are expected to be digital, so they can be shared with me and their peers. Then, prior to the exam, I aggregate the study guides, so students have a single document to reference in their studies.

One of the reasons I love this activity is because it does a great job of combatting a common challenge in engineering classrooms, posturing (i.e., a need to appear smart). Jigsaw works to challenge posturing by teaching students that its unreasonable to become an "expert" after a 55-minute session. Instead, I ask students to spend the time getting familiar enough with the topic to be able to ask informed questions. These questions are then discussed in the original groups and ultimately as a class. Again, this community-based approach to education allows students to let down their guard and trust that everyone around them has their best interest in mind.

With that said, I have found that students occasionally argue that jigsaw activities are a waste of time. In fact, in my last course evaluation survey, a student stated that they weren't "the biggest fan of the "Assigning Experts" activities," and that they thought that "assigning students to learn the lesson of the day themselves defeats the entire purpose of a lecture." To me, this feedback signaled more of a failure of mine to communicate the value of jigsaw than it was a critique of the activity itself. As a result, as I move forward in my teaching, I plan to stress the importance of using jigsaw to build out community in the classroom. After all, the purpose of jigsaw is not for students to teach themselves the material but to learn the value of contributing to a community.

Since integrating jigsaw in the classroom in Autumn 2021, I have been really pleased with how it has changed the dynamic of my classroom. Students rely less on me as the arbiter of knowledge and more on their peers, which has been a delight for me as an educator. No one should be going through education alone.

Evaluative Feedback and Summary

As an educator, I like to imagine that my efforts to build community in the classroom are effective. However, even when following the recommended teaching strategies for building community, I cannot be sure that my students are buying into the value of community in the classroom. That's why each semester **I take a comprehensive approach to collecting both quantitative and qualitative feedback on my teaching**.

Over the past several semesters of teaching, I have made a concerted effort to collect **qualitative** feedback both in and out of the classroom. For example, at the end of each semester, I administer a survey which asks students their thoughts on the most and least valuable aspects of the course. Meanwhile, in the classroom, I use a mix of anonymous polling and facial expressions to get a feel for how students are enjoying the course in real time. Likewise, I also leverage other tools like leading questions and concept questions to get a feel for how students are engaging with the content. In some cases, I have gone as far as to ask peers and other instructors for qualitative feedback through recordings of my teaching. Similarly, I previously took advantage of the Drake Institute for Teaching and Learning's Small Group Instructional Diagnosis (SGID) program to get crowd sourced feedback from my students. Together, these various forms of qualitative feedback are useful because they provide detailed accounts of how students perceive the course.

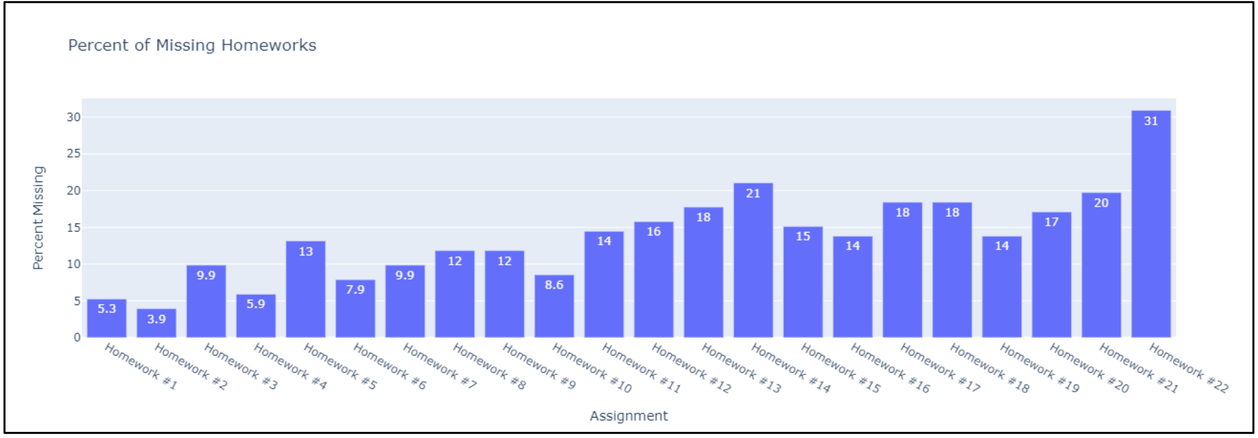
While qualitative feedback is helpful in determining actions I might take going forward, I often find it just as helpful to get more generalized feedback in the form of **quantitative** data. For instance, as with qualitative feedback, I also collect quantitative feedback with the same end-of-semester survey. Specifically, I use it to collect Likert scale data relating to course content, skill and responsiveness of instructor, and contribution to learning. Similarly, the university administers the Student Evaluation of Instruction (SEI) survey to all students each semester. The SEIs are useful for telling me how I compare to other instructors in the department, college, and university. Most recently, I also started administering an assignment survey to students to get a feel for how long they were spending on each assignment. My goal is to use this data to prepare future students with a rough amount of expected time needed to complete each assignment. Finally, because I am an engineer, I like aggregate all of these quantitative data into a dashboard, where I can visualize areas of growth such as organization and preparation.

While quantitative and qualitative data are useful on their own, **I like to take time at the end of each semester to integrate the two data sets and reflect on what I have learned**. In my most recent reflection, I reported out on all the data collected over the previous semester. Then, I took a moment to think about ways I might improve the course for future students. In the remainder of this document, I will outline the various ways that I have chosen to improve my course, Software Components (CSE 2221), for the Spring 2022 semester.

One of the biggest changes I have made in preparation of the upcoming semester is to create **assignment keys**. Each semester, students are expected to complete 22 written homework assignments. However, we never give the students keys to these assignments. According to feedback I have gotten from students, the lack of assignment keys is frustrating because students never know what a good answer might look like. As a result, their ability to study from the homework is limited. Likewise, previous graders have told me that the lack of keys can make it more challenging to grade assignments. Of course, the downside of having assignment keys is the risk of academic integrity issues. To me, however, the payoffs far outweigh the risks, so I have created assignment keys for the upcoming semester.

Along the same line as assignment keys, I also have created **project checklists** for the upcoming semester. When graders are grading the projects, they are not just looking for good code. They are also looking for professional best practices. Unfortunately, students often grow frustrated by this because they might not get the grade they want for a working solution. To address this issue in the past, I had created rubrics for each project. However, I still had students complaining that they lost points for best practices. As a result, I have decided to include a checklist with each project to remind students of the types of things they should do before submitting their project (e.g., including their name in the code). My hope is that these checklists will help students earn easy points.

In addition to assignment keys and project checklists, this upcoming semester I will be giving students **homework templates**. In the past, students would have to complete their homework by answering questions in a text editor like Word. As a result, I found that students would often turn in wildly different looking assignments which often slowed down the graders. Likewise, because we expect a certain amount of professionalism, students sometimes lost points for poorly formatted assignments. Unsurprisingly, I often received a lot of feedback around homework assignments from frustrated students and graders. As a result, I decided to put together homework templates, so students can spend less time formatting documents and more time learning. My hope is that this will improve the amount of homework assignments that students submit. After all, here is the current trend of missing assignments over the course of a semester:



Finally, while I have made many efforts to improve assessment for students, I also think my students will appreciate it if I am more transparent with them. As a result, I plan to make the data dashboard, from which the previous plot was generated, accessible to my students. My belief is that if students can see that I care about their opinions, then hopefully they will feel open to sharing them with me sooner rather than later in the semester. After all, if I am adamant about building my class out as a community, then **I should be willing to make changes on-the-fly when the community raise concerns**.

THE OHIO STATE UNIVERSITY

Jeremy Grifski SEI Cumulative Report through Autumn 2021

Mean Scores, all questions

Courses are listed in order by catalog number, then term. Combined sections are listed together.

Q1: The subject matter of this course was well organized
Q2: This course was intellectually stimulating
Q3: This instructor was genuinely interested in teaching
Q4: The instructor encouraged students to think for themselves
Q5: The instructor was well prepared
Q6: The instructor was genuinely interested in helping students
Q7: I learned a great deal from this instructor
Q8: The instructor created an atmosphere conducive to learning
Q9: The instructor communicated the subject matter clearly
Q10: Overall, I would rate this instructor as

Subject	Course	Class	Term	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	**Q10**
CSE	1223	26319	AU 18	4.13	4.38	4.72	4.75	4.50	4.72	4.53	4.53	4.44	4.63
CSE	1223	8281	SP 19	4.48	4.48	4.68	4.65	4.61	4.71	4.58	4.53	4.55	4.77
CSE	1223	8282	SP 19	4.47	4.53	4.67	4.57	4.53	4.63	4.55	4.59	4.53	4.77
CSE	2221	35160	AU 19	4.57	4.39	4.87	4.83	4.74	4.96	4.74	4.87	4.78	4.91
CSE	2221	11278	SP 20	4.03	4.45	4.72	4.69	4.66	4.83	4.62	4.55	4.48	4.76
CSE	2221	29428	AU 21	3.91	4.31	4.81	4.84	4.72	4.91	4.63	4.71	4.69	4.84

Response Count and University Comparison

Comparison of the instructor's mean score for Q10 to the University mean for classes in the same size group during the same term

Subject	Course	Class	Term	Size	Resp	Mean, Instr	Mean,Univ
CSE	1223	26319	AU 18	M	32	4.63	4.34
CSE	1223	8281	SP 19	M	30	4.77	4.37
CSE	1223	8282	SP 19	M	30	4.77	4.37
CSE	2221	35160	AU 19	M	23	4.91	4.37
CSE	2221	11278	SP 20	M	29	4.76	4.45
CSE	2221	29428	AU 21	M	31	4.84	4.41

THE OHIO STATE UNIVERSITY

Jeremy Grifski SEI Class Detail Report Autumn 2021

Classes included in this report:

Subject	Catalog Number	Class Number
CSE	2221	29428

Raters	Students
Responded	32
Invited	38
Response Ratio	84%

Frequency Analysis

The 9 questions of the SEI are organized around three key elements of teaching. Results are grouped based on these elements.

Instructor's preparedness, organization of material, and clarity of presentation

	Response#	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	N/A
1. The subject matter of this course was well organized	32	0%	6%	28%	34%	31%	0%
5. The instructor was well prepared	32	0%	0%	0%	28%	72%	0%
9. The instructor communicated the subject matter clearly	32	0%	0%	3%	25%	72%	0%

Rapport and instructor commitment

	Response#	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	N/A
3. This instructor was genuinely interested in teaching	32	0%	0%	0%	19%	81%	0%
6. The instructor was genuinely interested in helping students	32	0%	0%	0%	9%	91%	0%
8. The instructor created an atmosphere conducive to learning	31	0%	0%	3%	23%	74%	0%

Students' sense of their own learning

	Response#	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	N/A
2. This course was intellectually stimulating	32	0%	0%	16%	38%	47%	0%
4. The instructor encouraged students to think for themselves	32	0%	0%	0%	16%	84%	0%
7. I learned a great deal from this instructor	32	0%	0%	6%	25%	69%	0%

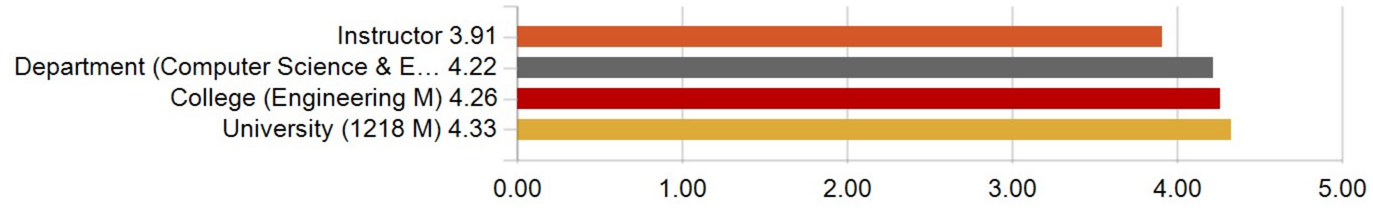
Overall, I would rate this instructor as... (Question 10)

Response#	Poor	Fair	Neutral	Good	Excellent
31	0%	0%	0%	16%	84%

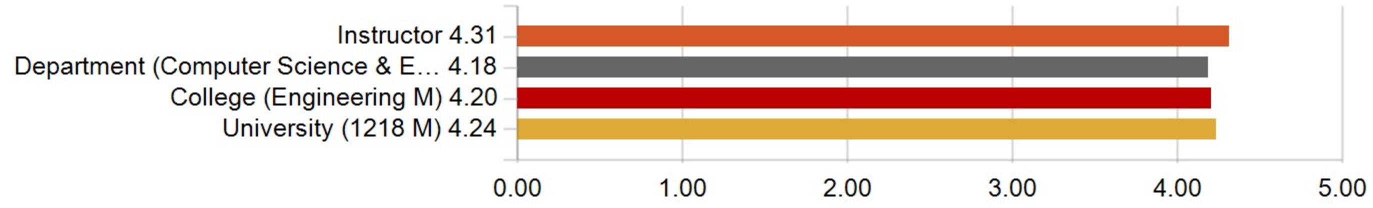
Score Analysis

Your mean scores are summarized below. Comparison group scores are provided. The College and the University comparison groups are based on the size of your class. The Department group is not. Class size groups are 1-19, 20-60, and 61+. This information is also presented as a table at the end of this section.

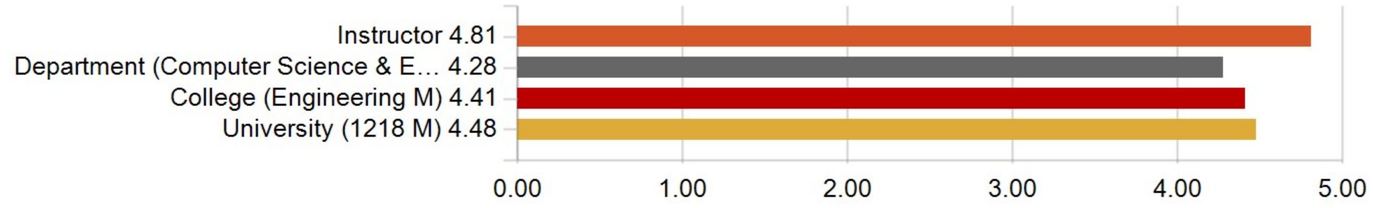
1. The subject matter of this course was well organized



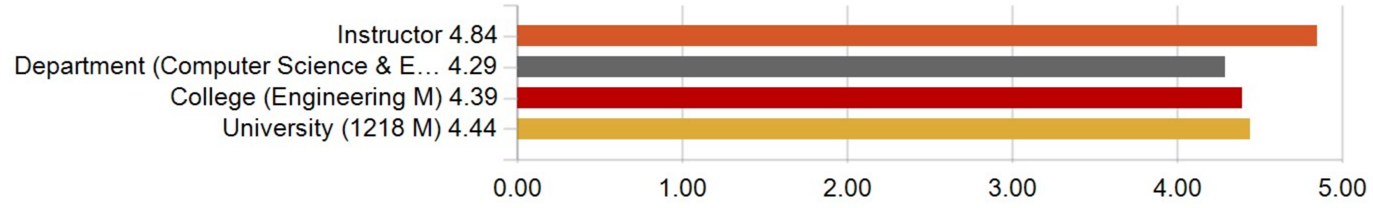
2. This course was intellectually stimulating



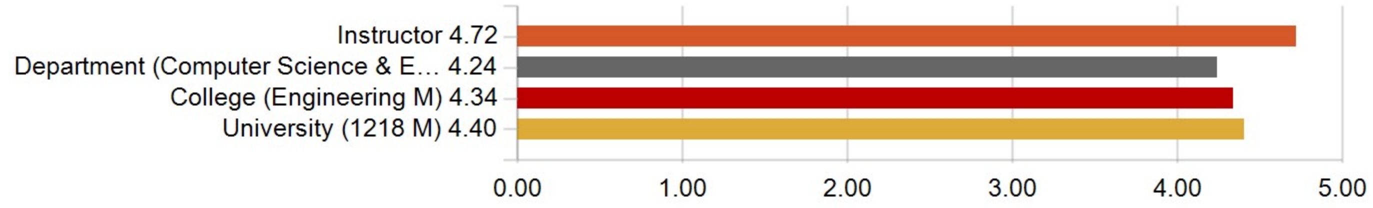
3. This instructor was genuinely interested in teaching



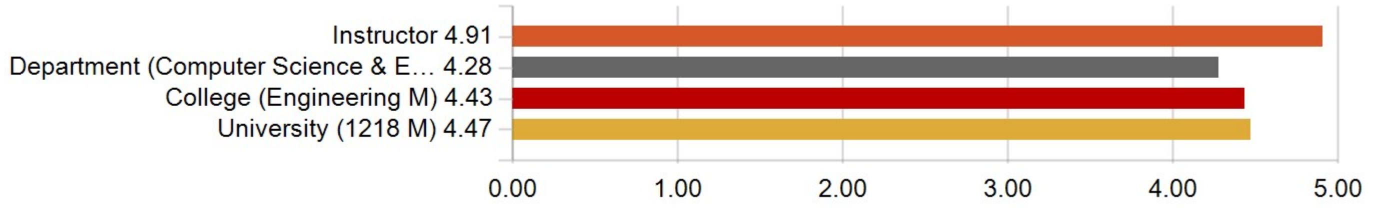
4. The instructor encouraged students to think for themselves



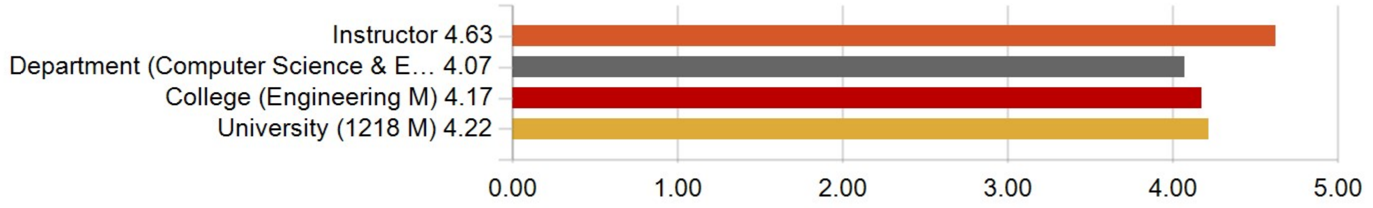
5. The instructor was well prepared



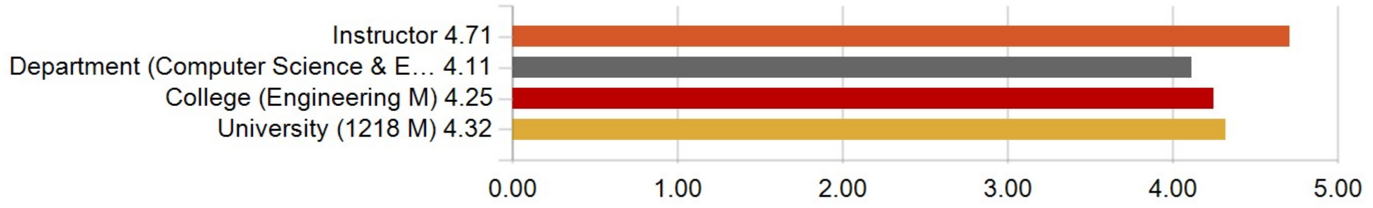
6. The instructor was genuinely interested in helping students



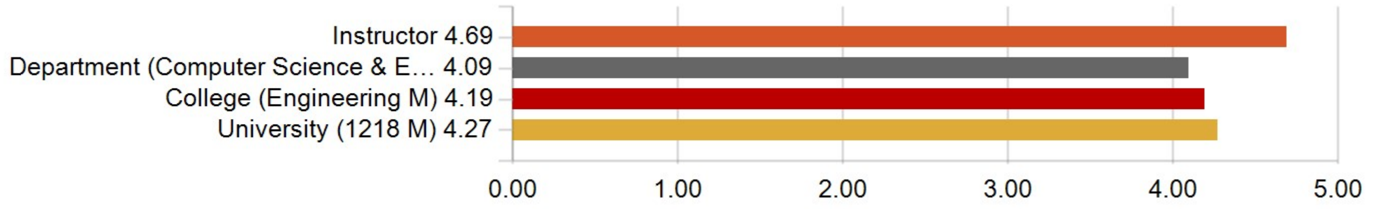
7. I learned a great deal from this instructor



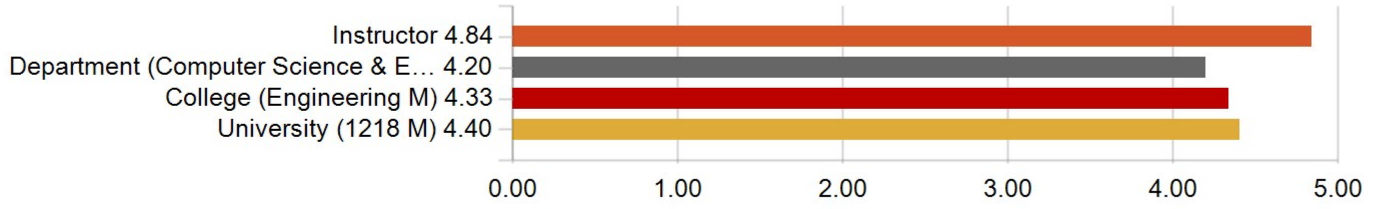
8. The instructor created an atmosphere conducive to learning



9. The instructor communicated the subject matter clearly



10. Overall, I would rate this instructor as



Question	Instructor		Department (Computer Science & Engr)		College (Engineering M)		University (1218 M)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
1. The subject matter of this course was well organized	3.91	0.93	4.22	0.95	4.26	0.94	4.33	0.92
2. This course was intellectually stimulating	4.31	0.74	4.18	0.96	4.20	0.98	4.24	0.97
3. This instructor was genuinely interested in teaching	4.81	0.40	4.28	0.94	4.41	0.85	4.48	0.84
4. The instructor encouraged students to think for themselves	4.84	0.37	4.29	0.88	4.39	0.83	4.44	0.83
5. The instructor was well prepared	4.72	0.46	4.24	0.95	4.34	0.91	4.40	0.89
6. The instructor was genuinely interested in helping students	4.91	0.30	4.28	0.95	4.43	0.85	4.47	0.86
7. I learned a great deal from this instructor	4.63	0.61	4.07	1.07	4.17	1.01	4.22	1.02
8. The instructor created an atmosphere conducive to learning	4.71	0.53	4.11	1.02	4.25	0.95	4.32	0.94
9. The instructor communicated the subject matter clearly	4.69	0.54	4.09	1.04	4.19	1.01	4.27	1.01
10. Overall, I would rate this instructor as	4.84	0.37	4.20	1.03	4.33	0.96	4.40	0.94

Please select the primary reason you enrolled in this class

Please select the primary reason you enrolled in this class		
Options	Count	Percentage
It was specifically required in my major/minor	28	93%
It was one of several choices to meet a requirement in my major	2	7%
It fulfills a General Education requirement	0	0%
It was a free elective choice	0	0%

Comments

Comments are retained for one year. This section will be deleted from this report at the end of Autumn 2022. Please save a copy of this report if you want access to comments after that time.

Comments:

Comments
He did a great job teaching us the content, in a stimulating way for every student.
This class was amazing! I really hope you consider taking more courses! The education sector needs more instructors like you!
He took the class itself, which isn't structured the best, and made it into something compelling and exciting to learn about. Calls out a lot of bs in the CSE department, which I appreciate. I love a teacher that knows the flaws in something and still tries to make the best out of it. Would definitely recommend him.
Jeremy was the best instructor/teacher I've had in my entire life. He's awesome!
Really wish he could teach all of my CSE classes. You could tell he is passionate about the material.
He was aware of the shortcomings in the course material itself and specifically planned around it while also listening to student feedback.
I hate how this course is organized and taught like it’s the 1990s, but Jeremy was a great instructor and gave us all of the

Comments
information we needed to know. Hands down best instructor I’ve had so far in college. He also takes time outside of class to make sure his students understand the content and is understanding about adjusting deadlines as needed. I felt well prepared for every exam and project. Keep it up Jeremy!!
Great instructor! I learned a lot from Professor Grifski.
He was a very good professor. Went out of his way to improve the course material as he viewed it as inadequate in some areas.
Jeremy Grifski was an amazing teacher. One of, if not the best, instructors I've ever had. He was absolutely fantastic and was always open to any questions. He was also always really understanding of any unlucky circumstances that may happen to students and always was flexible in accommodating. He also always make time for his students, especially outside of class.
i love u jeremy, thank you so much for being a great teacher. the class was really nice and it's obvious that you really care about your students.
Grifiki is a kind person who really cares for his students. He is enthusitic of teaching and try to let his students to engage. He always stay at lab and answer a lot of questions of his students. All in all, he is a great professor.
Thank you so much for the great class! You are the most awesome instructor I've ever had!
The interactive lecture–style was helpful
Passionate instructor
Great instructor
You did a great job this semester teaching us. The only thing I would change about the class I would change is instead of going through slides with the most basic examples of methods for all the Osu components like natural number, I would go through those more quickly and then show real examples of code with multiple methods from natural number, sequence, or whatever component you are teaching in eclipse or something like that and show editing the code in real time and what it does to end result by changing variables or lines of code. In this course we really don’t see any examples of real code that's not just the simplest examples of methods separate from each other besides our own code that we create for the most part on our own. For me, who is someone with little to no coding experience before this class (zero coding in high school and I didn't even know what I didn't know in CSE 1223 last semester) its all in sort of a foreign language to me. To me its like I'm learning English for the first time and I'm given the abc's or individual words (methods), a dictionary (the API), and a few lessons on basic grammar rules (contracts for the methods) and you are telling me to write and essay about a concept of its own. Thats obviously an oversimplified and a little bit exaggerated metaphor, but I think it makes sense. I am ok with writing an essay (code for a program) like that but I think it would be so much more efficient if we had more complex examples of real code, or examples of some sentences to continue my metaphor, about a different topic. For the kids in this class that are way more proficient and experienced at coding in general let alone in just java, it may not make the biggest difference, but for the people who feel lost sometimes it think it would make a world of difference. It's like expecting us to become better writers in English class without ever seeing examples of good writing on top of it being in a language we aren't very familiar with. I understand you can't give us examples of solutions to the projects we are doing, but it would still be helpful seeing them for other tasks. I know labs are kind of supposed to do this but once again its code we mostly create or just a partner's. Having you walk us through code live as you write it to solve a simple problem as an example or even you describing a possible coding solution to a problem that is already written would be immensely helpful so we can learn good coding practices and techniques from someone (you) who is good at coding. I know there isn't one correct answer to any of these coding projects or problems, but there are certainly better solutions than others and seeing some of the better solutions as someone who is writing the not as good solutions it would help me get out of the sort of echo chamber of the same coding techniques I know how to do because its the best I could come up with even though it may not be the best or most efficient way of doing things because I don't know anything different. As long as this whole comment was I was just trying to be thorough in my explanation because obviously you can't respond if you have any questions what I am talking about. I appreciate all the help you gave this semester and think you did great. I understand this class is supposed to be unnecessarily hard and I appreciate you taking the effort to make it easier for some innocent software I students who did nothing to deserve the hardships this class was meant to bring along.
Best instructor I met in OSU so far.