Report for CS 6501 - 015 Spec Top: Computer Science Chang Lou

Project Title: **2023 Fall Student Experience of Teaching**

Course Audience: **17**
Responses Received: **14**
Response Ratio: **82.35%**

Report Comments

Fall 2023 Individual Instructor Report by Section.

Final Report

Course Name: CS 6501 - 015 Spec Top: Computer Science
Instructor Name: Chang Lou

Evaluation Start Date: Nov 28 2023 12:00AM
Evaluation End Date: Dec 8 2023 12:00AM

Creation Date: **Thursday, January 4, 2024**

Fall 2023 Questionnaire

Course Preparation:

1. The average number of hours (per week) that I spent outside of class preparing for CS 6501 - 015 Spec Top: Computer Science :

- Less than 1
- 1-3
- 4-6
- 7-9
- 10 or more

Course Questions:

Answer the following questions based on your experience in CS 6501 - 015 Spec Top: Computer Science.
(Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree)

1)The course increased my enthusiasm for the topic.

2)Through this course I gained a deeper understanding of the subject matter.

3)I had access to the course materials I needed to learn, including access to required textbooks, course readings, technology tools, and other materials required for class assignments and projects.

* ***If the above question generates a negative response, a branching question will be generated:***

3-A) You disagreed or strongly disagreed that you did not have access to the course materials you needed to learn. Please review the options below and select any of the reasons that may better describe what affected your access to course materials.

- Internet speed and reliability
- Internet connectivity
- It was difficult to obtain hand-on materials needed for the course
- I didn’t have the funds to purchase the course materials
- The instructor didn’t provide the course materials needed to learn
- Other: Please Specify

Learning Activities Question:
To what extent did the following learning activities contribute to your learning? (A Lot, A Moderate Amount, A Little, Not At All)

- Real-time lecture
- Recorded lectures
- Recorded video demonstrations
- Hands-on activities
- Real-time, whole-class discussion
- Real-time small-group discussion
- Online discussion boards
- Office hours

Open Comment Questions (Course):

1) Please tell us briefly how any of the above learning activities (or other activities not included above) contributed to your learning in this course.

2) What would you like the instructor and university administrators to know about your experience in this course?

Instructor Questions:

Answer the following questions based on your experience with Chang Lou. Your constructive feedback will help your instructor identify what went well and ways to improve the course in the future.
(Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree)

1) The instructor clearly communicated the course schedule and expectations for participation (e.g., readings, discussions).

2) The instructor clearly communicated the course learning objectives.

3) The instructor implemented learning activities and assignments that allowed me to demonstrate understanding of the course material.

4) The instructor provided me prompt and useful feedback on my learning.

5) The instructor provided opportunities for my active participation.

6) The instructor was available to help support my learning.

7) The instructor fostered an environment where I felt valued as an individual and that I belonged in the class.

8) Overall, the instructor was an effective teacher.

9) The instructor created an environment that respected difference and welcomed diverse perspectives.

* ***A positive or negative response to the above question will generate a follow-up comment question.***

9A) You selected "AGREE or STRONGLY AGREE" on the previous question: Please give specific examples as to how Chang Lou created an environment that respected difference and welcomed diverse perspectives.

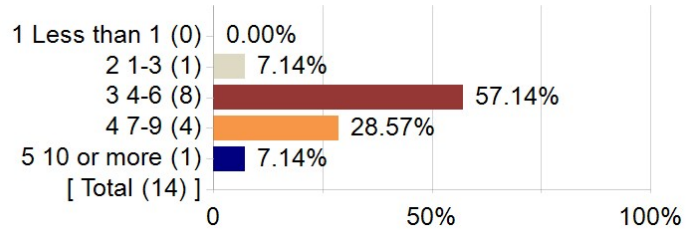
9B) You selected "DISAGREE or STRONGLY DISAGREE" on the previous question: Please give specific examples as to how Chang Lou did not create an environment that respected difference and welcomed diverse perspectives.

Open Comment Question (Instructor):
Your response to the open-ended question below will be shared only with Chang Lou. If this course was taught by multiple instructors, you will have the opportunity to provide feedback to each. Please avoid using instructors' names in your responses to ensure confidentiality.

1) What constructive suggestions do you have to help Chang Lou improve this course for future students?

Student Preparation

The average number of hours (per week) that I spent outside of class preparing for CS 6501 - 015 Spec Top: Computer Science:



Statistics	Value
Response Count	14
Mean	3.36
Median	3.00
Standard Deviation	0.74

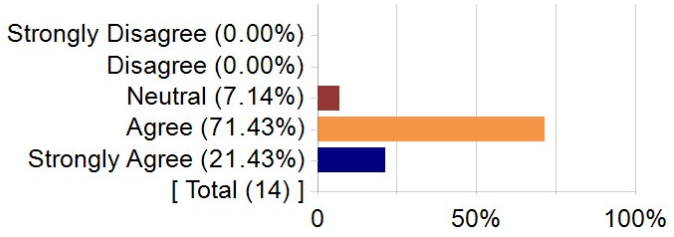
Course Questions

Mean values are displayed below.

Scale 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Question	Course (CS 6501 015)		Department (CS)		School (ENGR)		Institution (University of Virginia)	
	Response Count	Mean	Response Count	Mean	Response Count	Mean	Response Count	Mean
The course increased my enthusiasm for the topic.	14	4.14	4994	3.73	11530	3.81	67987	3.95
Through this course I gained a deeper understanding of the subject matter.	14	4.71	4994	4.16	11519	4.21	67963	4.30
I had access to the course materials I needed to learn, including access to required textbooks, course readings, technology tools, and other materials required for class assignments and projects.	14	4.50	4991	4.22	11523	4.30	67971	4.47

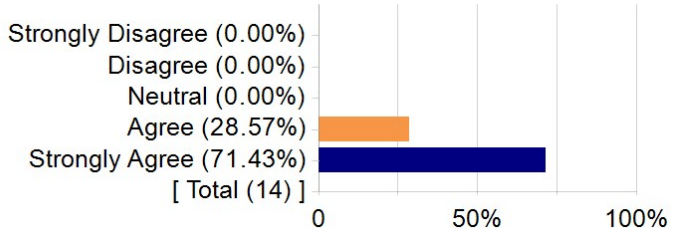
1. The course increased my enthusiasm for the topic.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	1	7.14%
Agree	4	10	71.43%
Strongly Agree	5	3	21.43%

Statistics	Value
Mean	4.14
Median	4.00
Standard Deviation	0.53

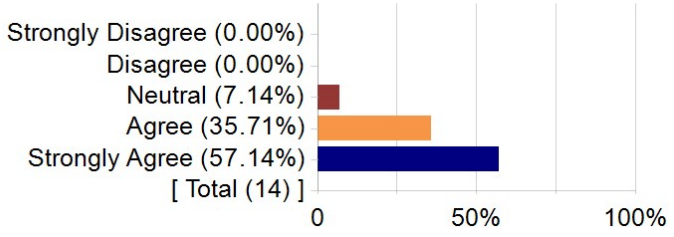
2. Through this course I gained a deeper understanding of the subject matter.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	0	0.00%
Agree	4	4	28.57%
Strongly Agree	5	10	71.43%

Statistics	Value
Mean	4.71
Median	5.00
Standard Deviation	0.47

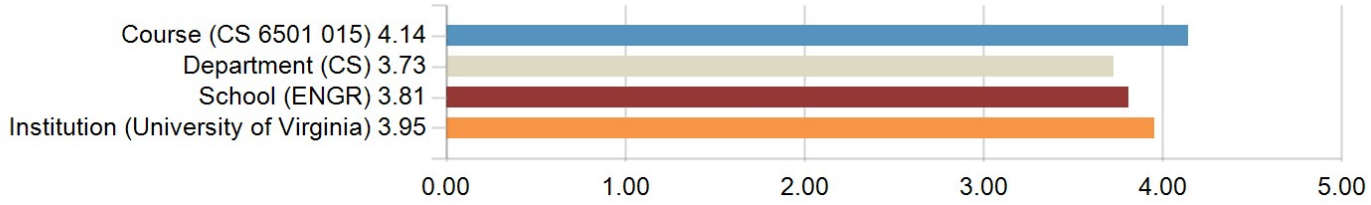
3. I had access to the course materials I needed to learn, including access to required textbooks, course readings, technology tools, and other materials required for class assignments and projects.



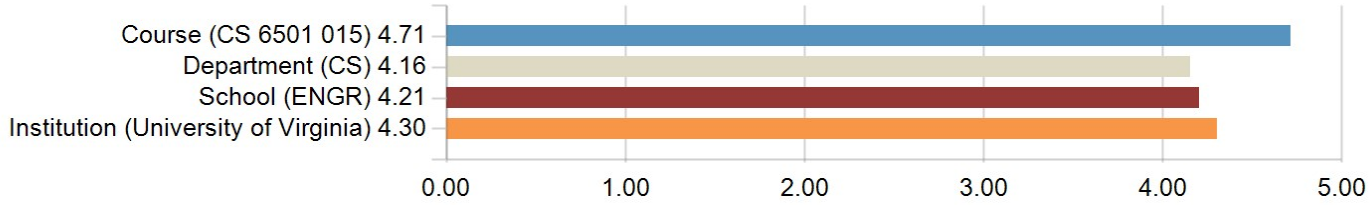
Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	1	7.14%
Agree	4	5	35.71%
Strongly Agree	5	8	57.14%

Statistics	Value
Mean	4.50
Median	5.00
Standard Deviation	0.65

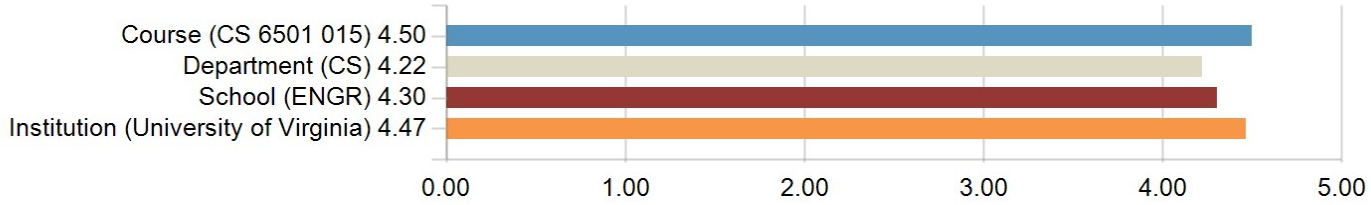
1. The course increased my enthusiasm for the topic.

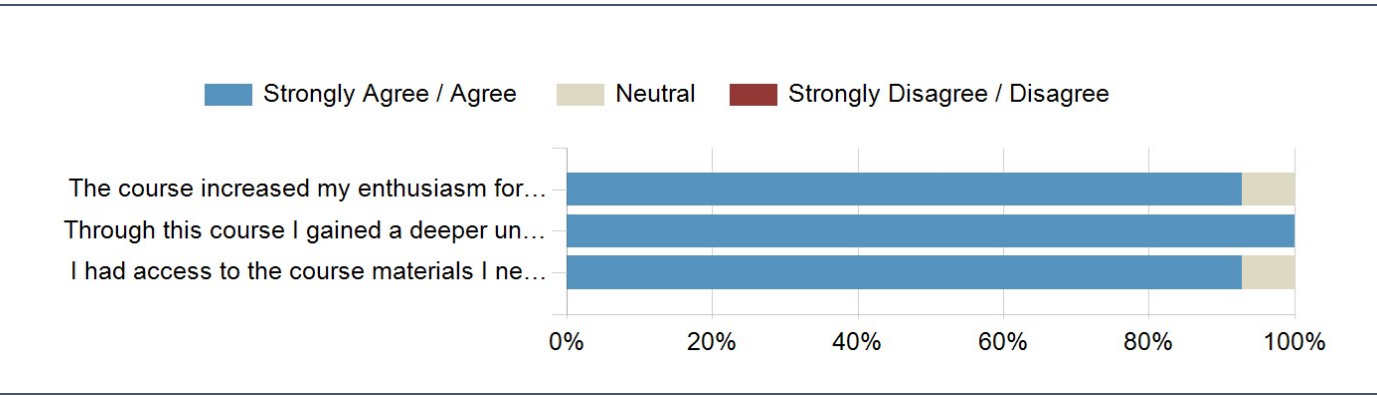


2. Through this course I gained a deeper understanding of the subject matter.



3. I had access to the course materials I needed to learn, including access to required textbooks, course readings, technology tools, and other materials required for class assignments and projects.





Learning Activities

Mean values are displayed below.

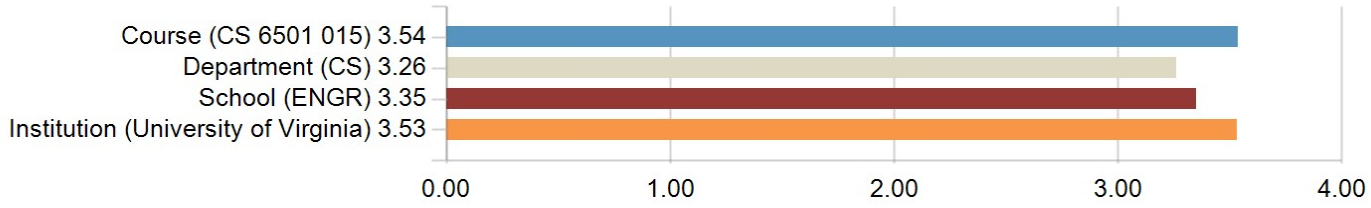
Scale: 1 = Not at All 2 = A Little 3 = A Moderate Amount 4 = A Lot

Learning Activities: To what extent did the following learning activities contribute to your learning?

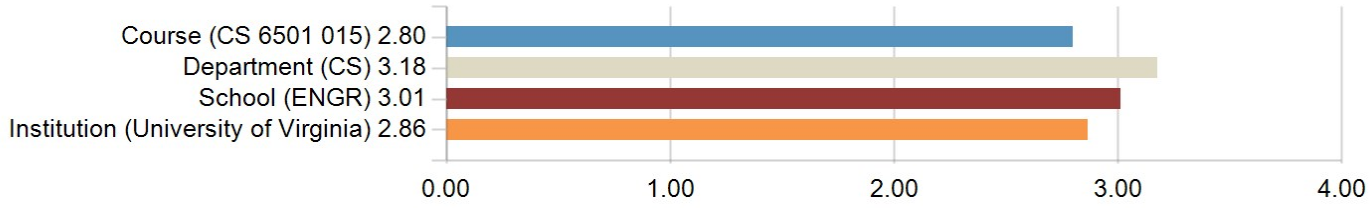
Question	Course (CS 6501 015)		Department (CS)		School (ENGR)		Institution (University of Virginia)	
	Response Count	Mean	Response Count	Mean	Response Count	Mean	Response Count	Mean
Real-time lecture	13	3.54	4541	3.26	10742	3.35	61965	3.53
Recorded lectures	5	2.80	3812	3.18	7336	3.01	32003	2.86
Recorded video demonstrations	5	2.60	2611	2.83	5565	2.81	28519	2.81
Hands-on activities	13	3.54	4223	3.37	8984	3.38	47171	3.33
Real-time whole-class discussion	12	3.58	3255	2.75	8152	2.94	52210	3.26
Real-time small-group discussion	12	3.33	3345	2.83	7947	3.03	49252	3.26
Online discussion boards	4	3.75	3506	2.96	6290	2.75	28698	2.67
Office hours	8	3.50	3874	2.98	8655	2.99	42248	2.91

Learning Activities: To what extent did the following learning activities contribute to your learning?

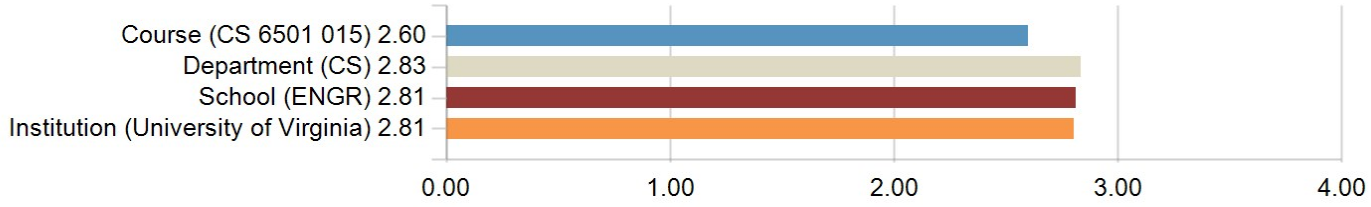
1. Real-time lecture



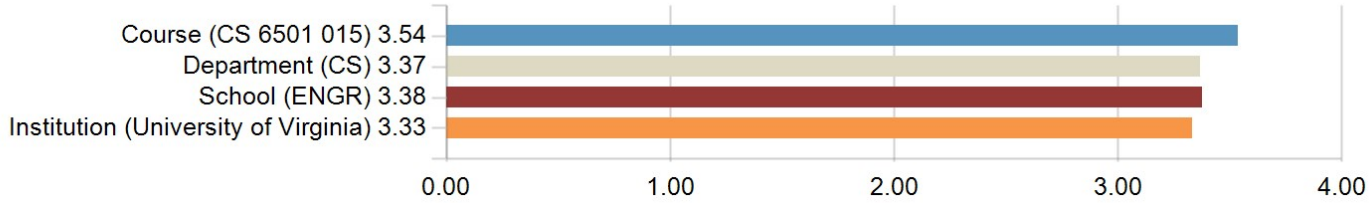
2. Recorded lectures



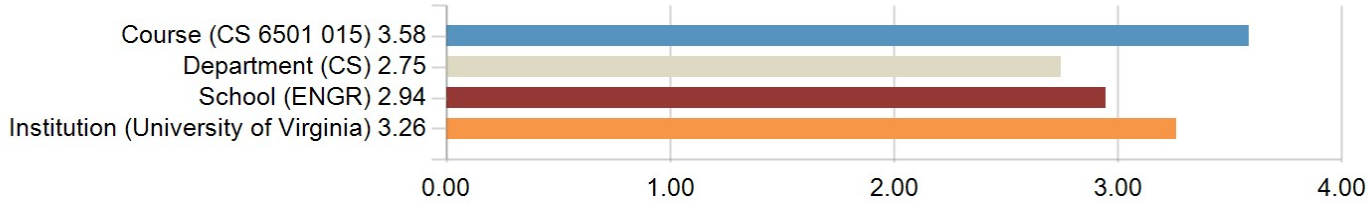
3. Recorded video demonstrations



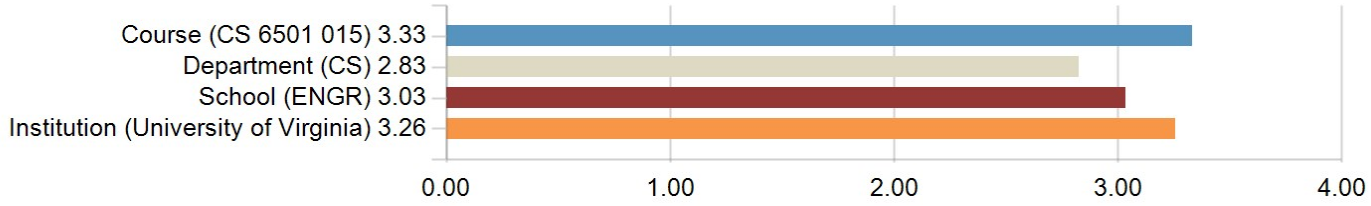
4. Hands-on activities



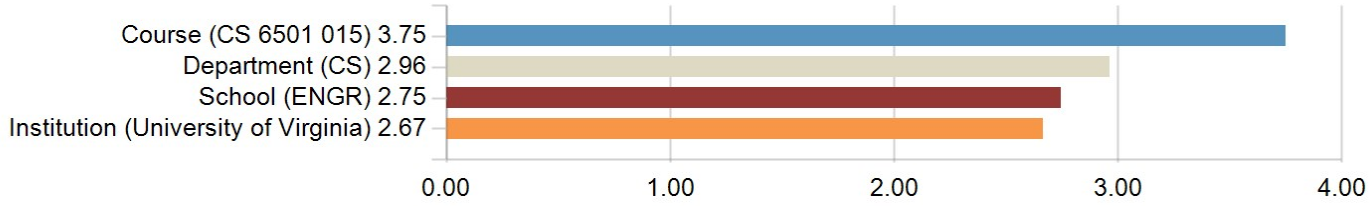
5. Real-time whole-class discussion



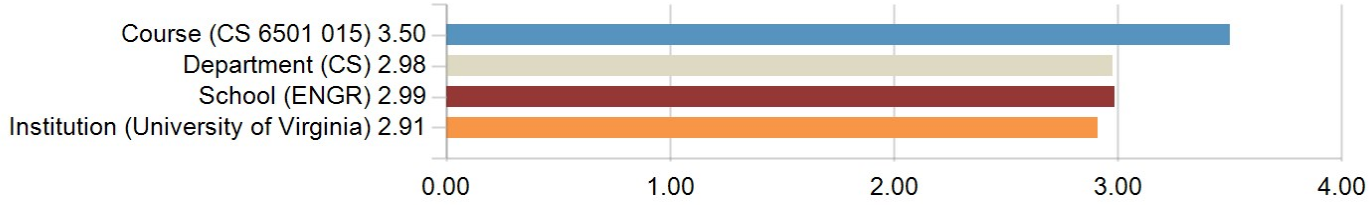
6. Real-time small-group discussion



7. Online discussion boards

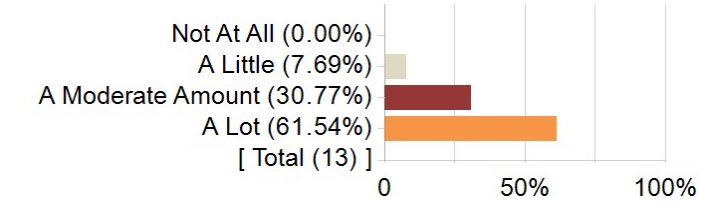


8. Office hours



Learning Activities: To what extent did the following learning activities contribute to your learning?

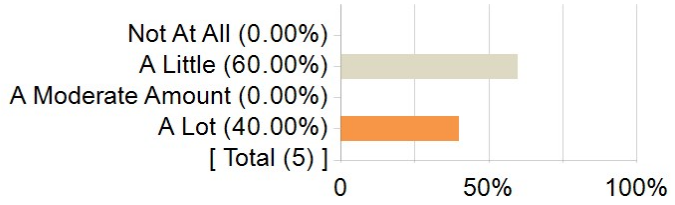
1. Real-time lecture



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	1	7.69%
A Moderate Amount	3	4	30.77%
A Lot	4	8	61.54%

Statistics	Value
Mean	3.54
Median	4.00
Standard Deviation	0.66

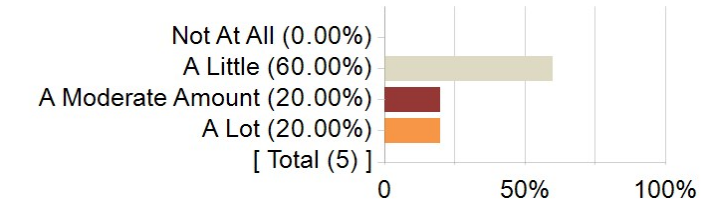
2. Recorded lectures



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	3	60.00%
A Moderate Amount	3	0	0.00%
A Lot	4	2	40.00%

Statistics	Value
Mean	2.80
Median	2.00
Standard Deviation	1.10

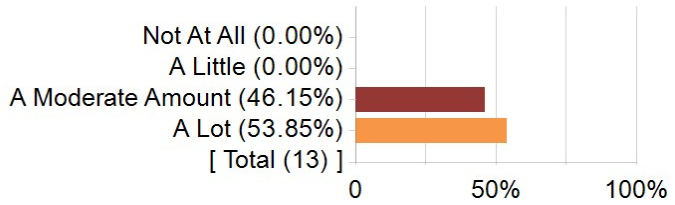
3. Recorded video demonstrations



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	3	60.00%
A Moderate Amount	3	1	20.00%
A Lot	4	1	20.00%

Statistics	Value
Mean	2.60
Median	2.00
Standard Deviation	0.89

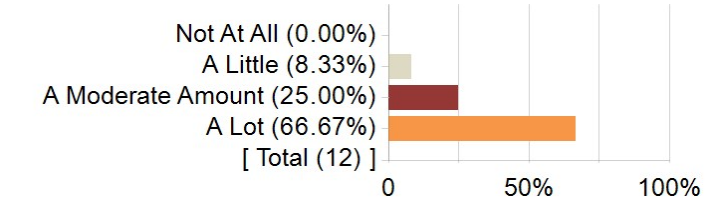
4. Hands-on activities



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	0	0.00%
A Moderate Amount	3	6	46.15%
A Lot	4	7	53.85%

Statistics	Value
Mean	3.54
Median	4.00
Standard Deviation	0.52

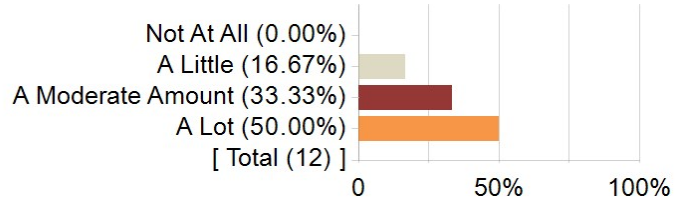
5. Real-time whole-class discussion



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	1	8.33%
A Moderate Amount	3	3	25.00%
A Lot	4	8	66.67%

Statistics	Value
Mean	3.58
Median	4.00
Standard Deviation	0.67

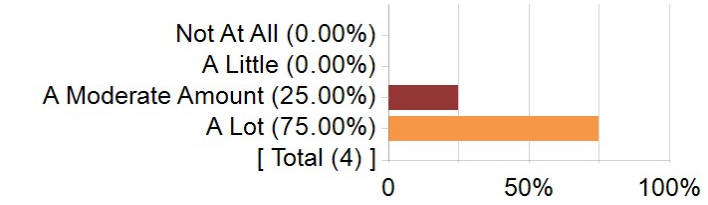
6. Real-time small-group discussion



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	2	16.67%
A Moderate Amount	3	4	33.33%
A Lot	4	6	50.00%

Statistics	Value
Mean	3.33
Median	3.50
Standard Deviation	0.78

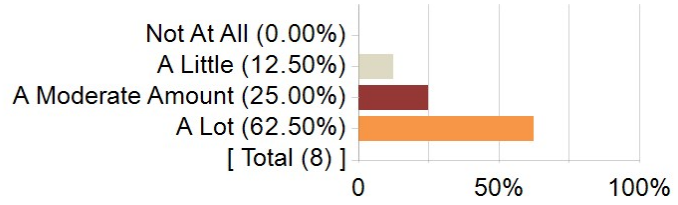
7. Online discussion boards



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	0	0.00%
A Moderate Amount	3	1	25.00%
A Lot	4	3	75.00%

Statistics	Value
Mean	3.75
Median	4.00
Standard Deviation	0.50

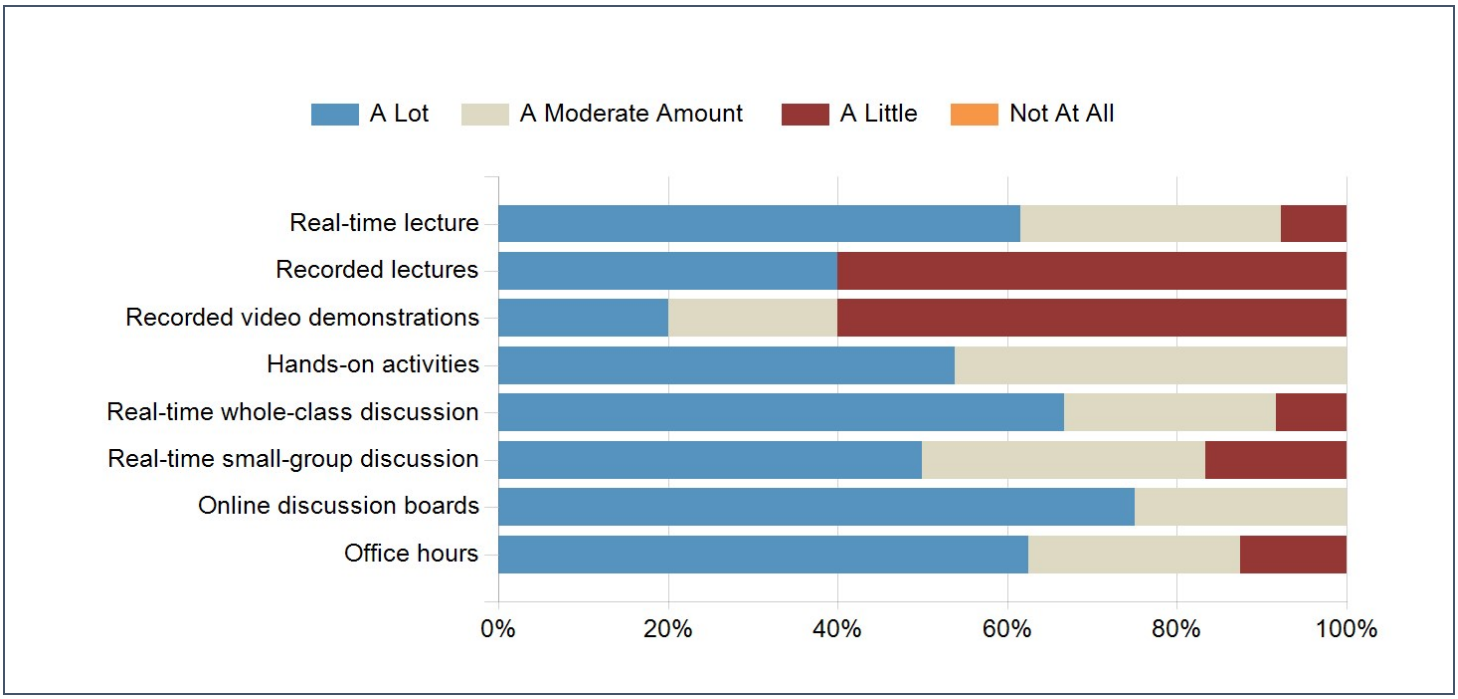
8. Office hours



Options	Score	Count	Percentage
Not At All	1	0	0.00%
A Little	2	1	12.50%
A Moderate Amount	3	2	25.00%
A Lot	4	5	62.50%

Statistics	Value
Mean	3.50
Median	4.00
Standard Deviation	0.76

Learning Activities: To what extent did the following learning activities contribute to your learning?



Please tell us briefly how any of the above learning activities (or other activities not included above) contributed to your learning in this course.

Comments
I appreciate Professor Chang for making every complex topic seem so simple. The interactive nature of the class and the hands–on activities made the whole experience memorable and made me grasp the complex material easily. Even though I could not attend the last few classes due to other deadlines, I really wish I could. I would definitely recommend my colleagues and friends to take this course if offered in the future.
That’s a good way to learn by discussing with group, because we could learn the different mind from others.
My learning was influenced by paper reading, student presentations, and class discussion. Paper reading contributed to my learning in a very direct manner by giving my background and details on the paper contents. Student presentations helped me to further refine my understanding of the paper. Finally, class discussion was a major contributed to my learning. Professor Chang provided valuable background and helped to contextualize the paper. Other students also had insights I had not considered.
I think the structure of the in–class presentations and resulting discussions were extremely valuable for learning about the relevant topics. I think perhaps a little bit more variety in the day–to–day class structure could have been useful as well.
We had some hands–on "game"–like activities which were very engaging and helped understand course content more
professor is glad to offer extra office hours which is sufficient for us to get help.
The small group discussions help me understand certain topics by exchanging ideas with fellow students.
Preparing and presenting classic papers truly aids in gaining a profound understanding of the topics.
Real–time lectures when the professor was explaining concepts were really insightful and helped me gain a deeper understanding of the topic.

Course Comments

What would you like the instructor and university administrators to know about your experience in this course?

Comments
The instructor did a great job in organizing this course. I am definitely going to carry with me a lot of knowledge on how cloud systems can be made more resistant to bugs, or how cloud system failures can be detected and localized quickly. It is a very practical course, and I would recommend students to take this course if they would like to become good software engineers.
This course was great. It struck a good balance between being a seminar–based course, by having lots of discussion and paper reading, and a lecture–based course, by having professor lead discussions to provide background on unfamiliar topics and how the topics we were discussing fit together. This second–part was critical for learning and was very well–done.
Loved the instructor's insight and passion for the material as well as his enthusiasm and sense of humor!
I really enjoyed this course and think that Professor Lou did an outstanding job of explaining complicated course concepts to us, for example analysis techniques like symbolic execution. This was one of my first experiences doing hands on project work in this context and Professor Lou was very helpful and guided our group to ensure that we had relevant and insightful findings. Overall, I definitely learned a lot about cloud systems and this class made me much more interested in cloud systems going forward, so a huge thank you to Professor Lou for doing a terrific job with this course.
it is good to have more activities and interactions in the class
My overall experience was great. I learned a lot about cloud system reliability. One comment I have is that the reading paper assignments were sometimes overwhelming, especially considering I also have other tasks to complete.
Consistent time input and output, coupled with hands–on study, greatly contribute to appreciating new topics in this field.
Excellent course. I usually never leave written reviews for courses but Professor Lou did a great job teaching this class. He was very encouraging and I was never scared to participate and share my thoughts in front of the class. The course content was well–selected and thoughtfully planned out.
I really loved this course and Professor Lou is a great professor! He explains concepts really well and always tries to help us learn more and expose us to many different aspects of cloud system reliability. I appreciated all of the support he provided with our final project and encouraging us to accomplish something within our limited timeframe. Additionally, the last few days of class where Professor held a "workshop" for listening to our classmates' presentations was super fun and the food provided helped boost my mood and lessen my stress. Overall, this class gave me the opportunity to learn about and explore an area I was unaware of before and leave knowing more that I thought I would. This was one of my favorite courses because of Professor Lou.

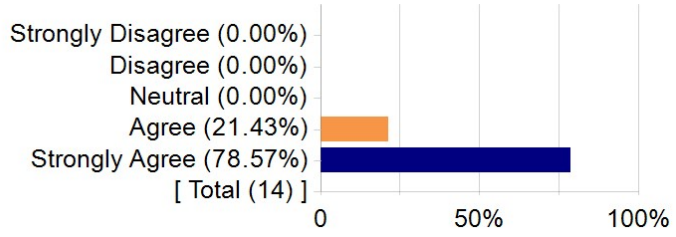
Instructor Questions

Mean values are displayed below.

Scale 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Question	Instructor Average - this course		Instructor Average - all courses (cqx3bu Chang Lou)		Department (CS)		School (ENGR)	
	Response Count	Mean	Response Count	Mean	Response Count	Mean	Response Count	Mean
The instructor clearly communicated the course schedule and expectations for participation (e.g., readings, discussions).	14	4.79	14	4.79	5058	4.28	12054	4.33
The instructor clearly communicated the course learning objectives.	14	4.64	14	4.64	5061	4.24	12045	4.31
The instructor implemented learning activities and assignments that allowed me to demonstrate understanding of the course material.	14	4.57	14	4.57	5056	4.20	12039	4.27
The instructor provided me prompt and useful feedback on my learning.	14	4.57	14	4.57	5061	3.80	12038	3.94
The instructor provided opportunities for my active participation.	14	4.57	14	4.57	5054	3.99	12031	4.15
The instructor was available to help support my learning.	14	4.79	14	4.79	5042	4.07	12018	4.22
The instructor fostered an environment where I felt valued as an individual and that I belonged in the class.	14	4.71	14	4.71	5043	4.00	12016	4.17
Overall, the instructor was an effective teacher.	14	4.64	14	4.64	5047	4.04	12025	4.16
The instructor created an environment that respected difference and welcomed diverse perspectives.	14	4.57	14	4.57	5054	3.95	12038	4.08

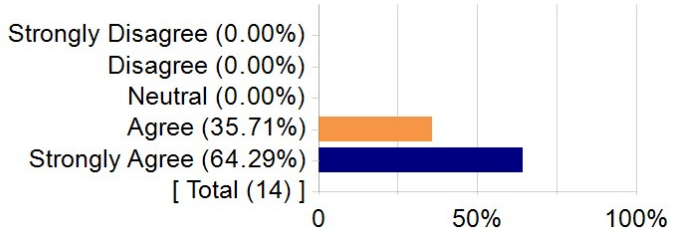
1. The instructor clearly communicated the course schedule and expectations for participation (e.g., readings, discussions).



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	0	0.00%
Agree	4	3	21.43%
Strongly Agree	5	11	78.57%

Statistics	Value
Mean	4.79
Median	5.00
Standard Deviation	0.43

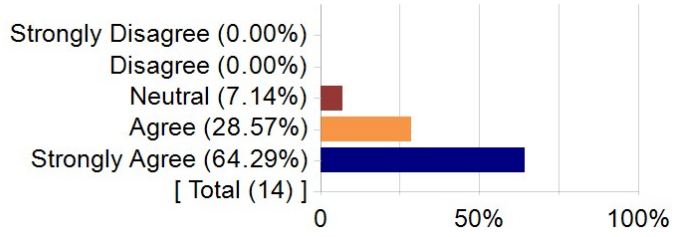
2. The instructor clearly communicated the course learning objectives.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	0	0.00%
Agree	4	5	35.71%
Strongly Agree	5	9	64.29%

Statistics	Value
Mean	4.64
Median	5.00
Standard Deviation	0.50

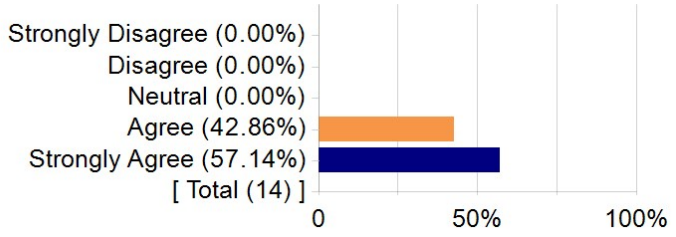
3. The instructor implemented learning activities and assignments that allowed me to demonstrate understanding of the course material.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	1	7.14%
Agree	4	4	28.57%
Strongly Agree	5	9	64.29%

Statistics	Value
Mean	4.57
Median	5.00
Standard Deviation	0.65

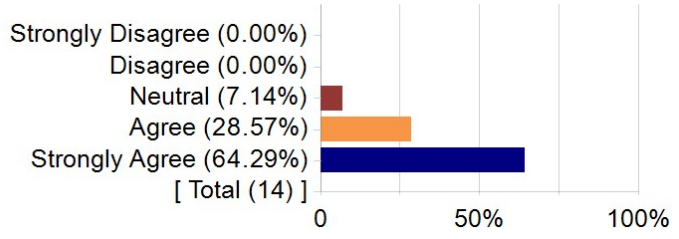
4. The instructor provided me prompt and useful feedback on my learning.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	0	0.00%
Agree	4	6	42.86%
Strongly Agree	5	8	57.14%

Statistics	Value
Mean	4.57
Median	5.00
Standard Deviation	0.51

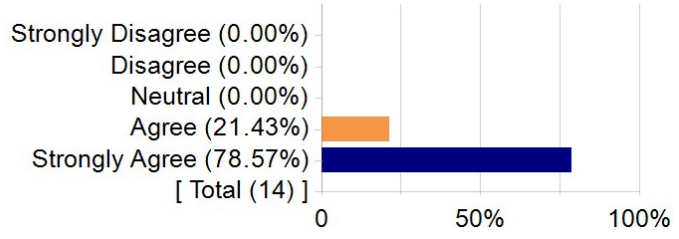
5. The instructor provided opportunities for my active participation.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	1	7.14%
Agree	4	4	28.57%
Strongly Agree	5	9	64.29%

Statistics	Value
Mean	4.57
Median	5.00
Standard Deviation	0.65

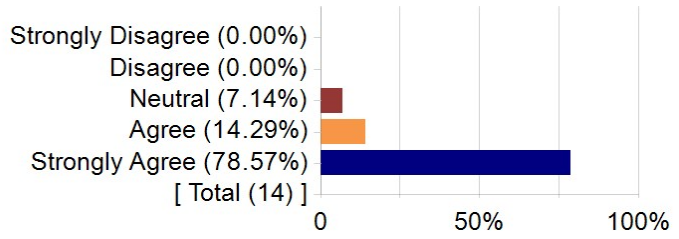
6. The instructor was available to help support my learning.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	0	0.00%
Agree	4	3	21.43%
Strongly Agree	5	11	78.57%

Statistics	Value
Mean	4.79
Median	5.00
Standard Deviation	0.43

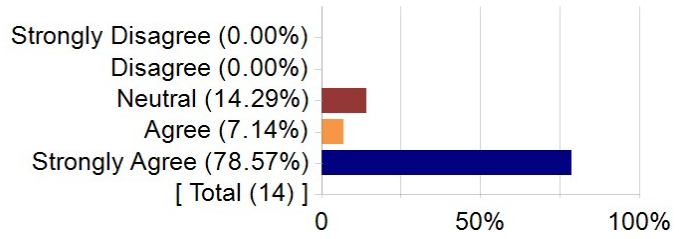
7. The instructor fostered an environment where I felt valued as an individual and that I belonged in the class.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	1	7.14%
Agree	4	2	14.29%
Strongly Agree	5	11	78.57%

Statistics	Value
Mean	4.71
Median	5.00
Standard Deviation	0.61

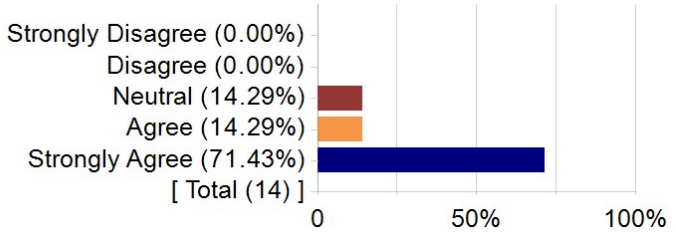
8. Overall, the instructor was an effective teacher.



Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	2	14.29%
Agree	4	1	7.14%
Strongly Agree	5	11	78.57%

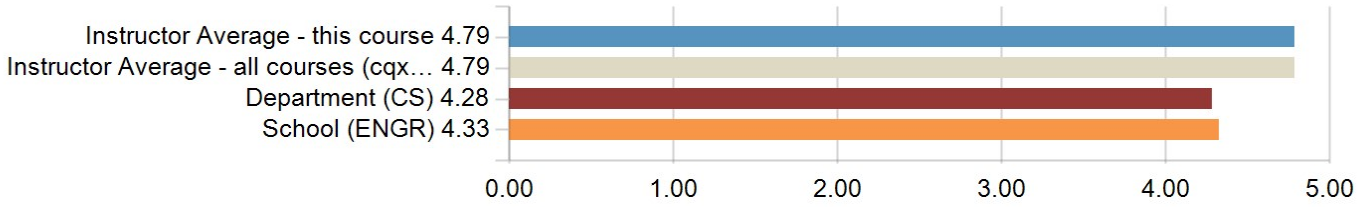
Statistics	Value
Mean	4.64
Median	5.00
Standard Deviation	0.74

9. The instructor created an environment that respected difference and welcomed diverse perspectives.

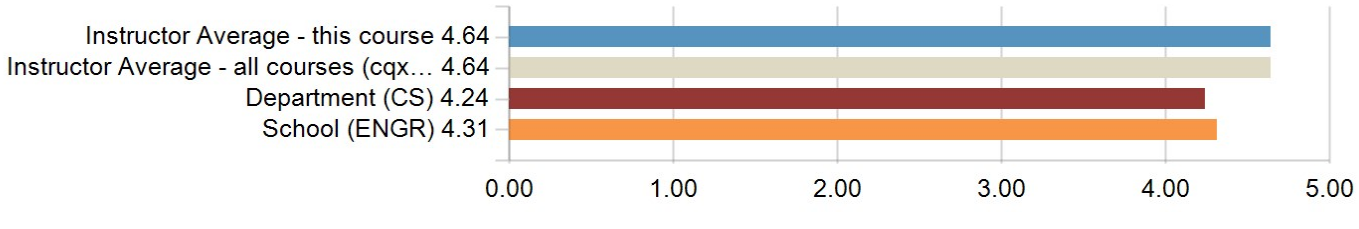


Options	Score	Count	Percentage
Strongly Disagree	1	0	0.00%
Disagree	2	0	0.00%
Neutral	3	2	14.29%
Agree	4	2	14.29%
Strongly Agree	5	10	71.43%
Statistics			**Value**
Mean			4.57
Median			5.00
Standard Deviation			0.76

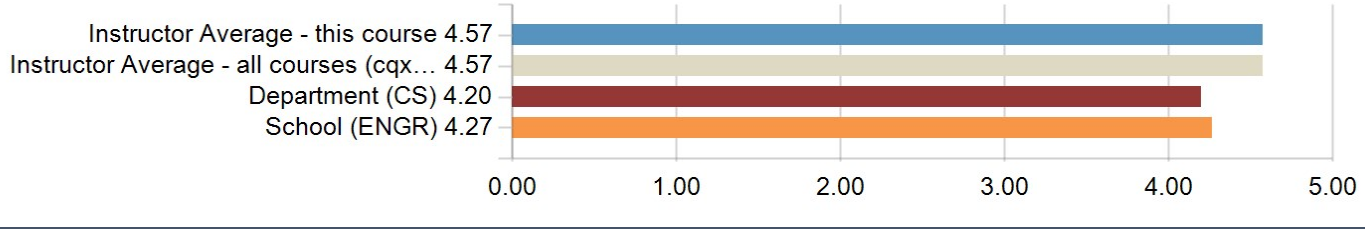
1. The instructor clearly communicated the course schedule and expectations for participation (e.g., readings, discussions).



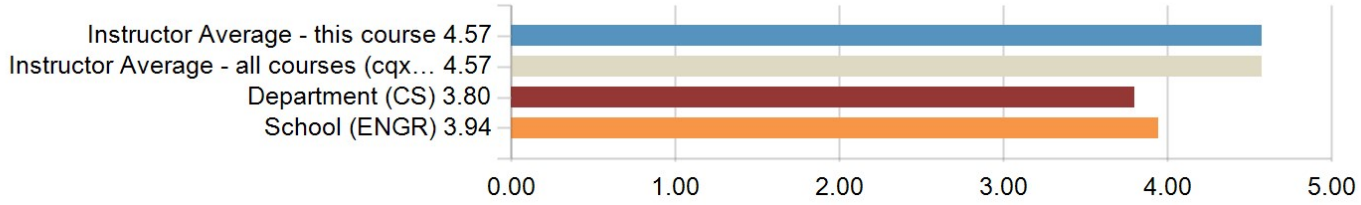
2. The instructor clearly communicated the course learning objectives.



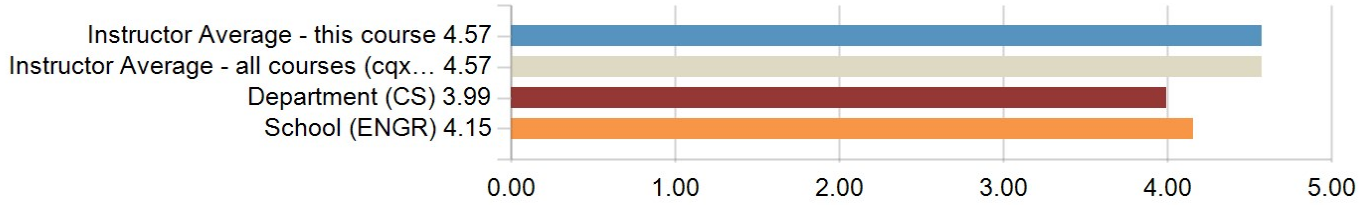
3. The instructor implemented learning activities and assignments that allowed me to demonstrate understanding of the course material.



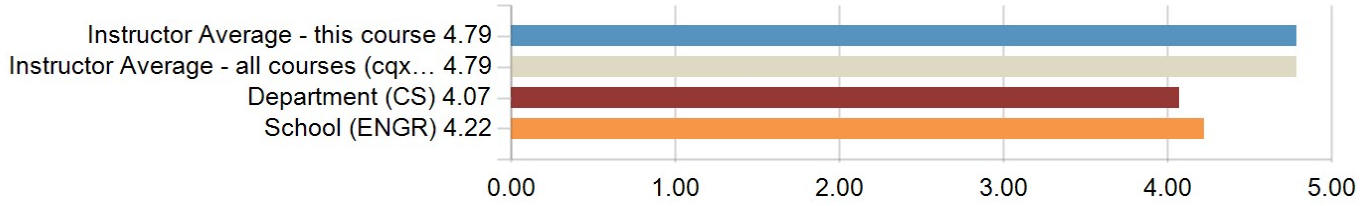
4. The instructor provided me prompt and useful feedback on my learning.



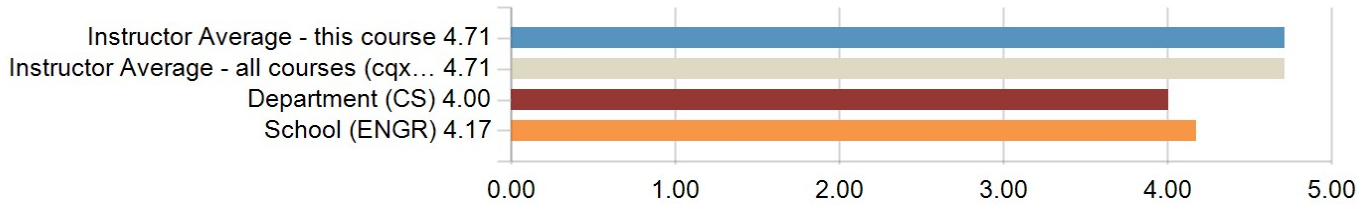
5. The instructor provided opportunities for my active participation.



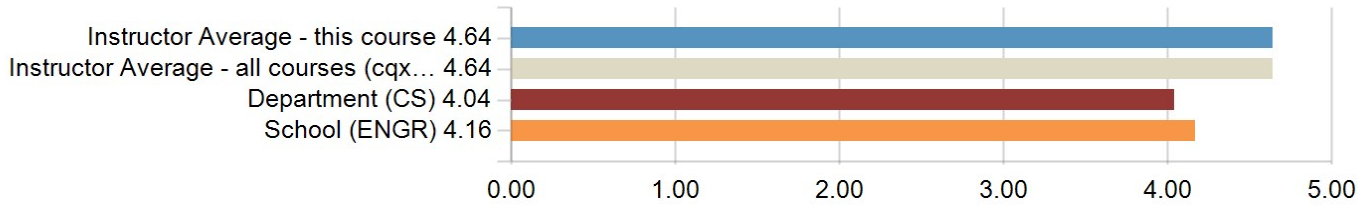
6. The instructor was available to help support my learning.



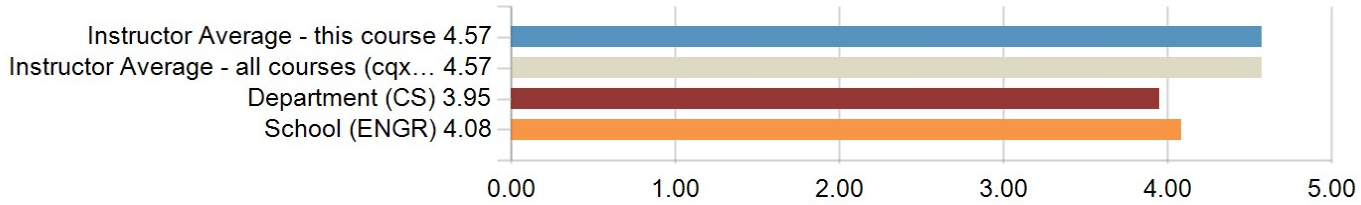
7. The instructor fostered an environment where I felt valued as an individual and that I belonged in the class.

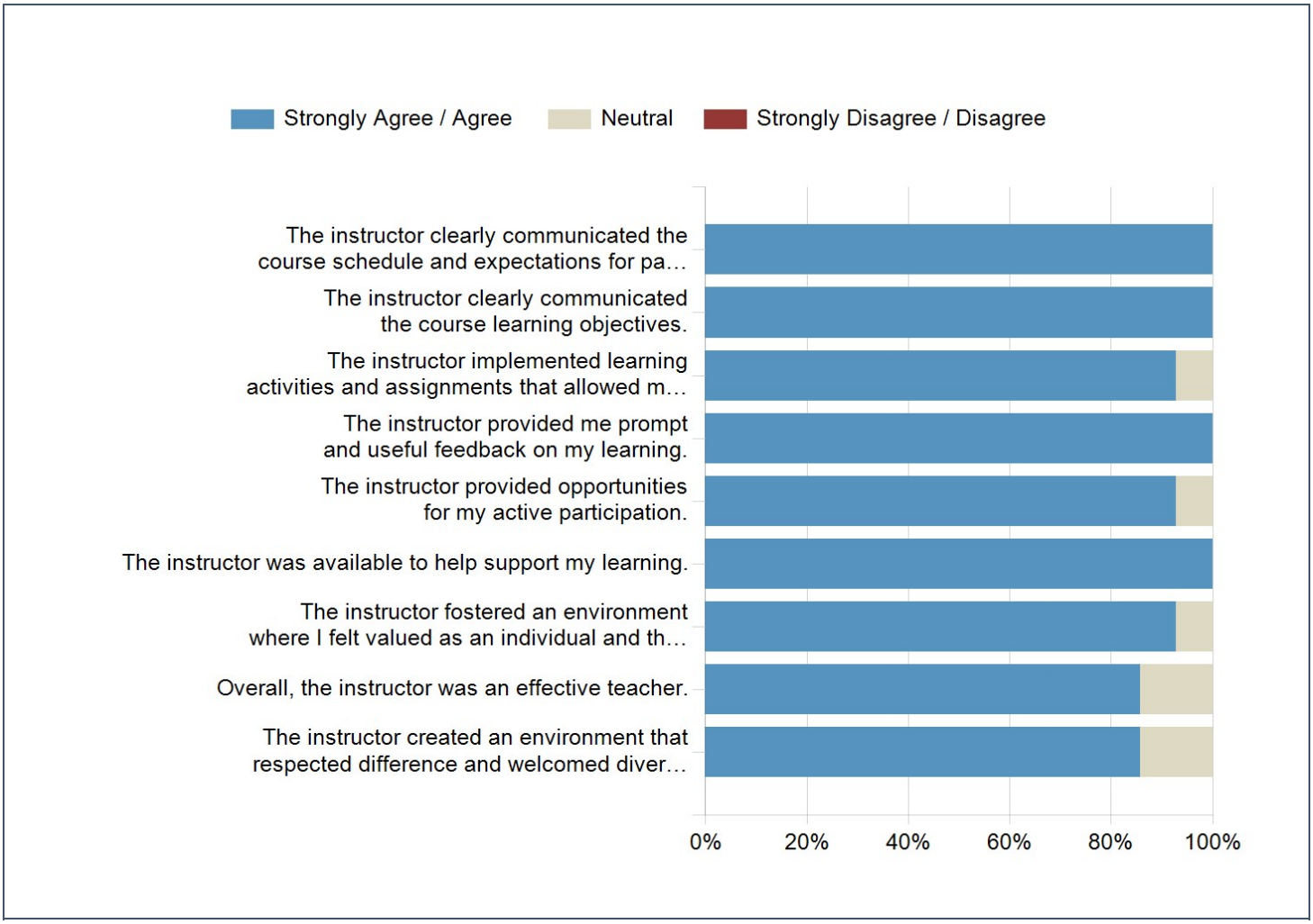


8. Overall, the instructor was an effective teacher.



9. The instructor created an environment that respected difference and welcomed diverse perspectives.





You selected "AGREE or STRONGLY AGREE" on the previous question: Please give specific examples as to how Chang Lou created an environment that respected difference and welcomed diverse perspectives.

Comments
Professor Chang would divide the class into 2 groups based on our seating arrangement and ask anyone from each group to communicate the answer. Everyone's answers were equally respected, whether they were right or wrong. Additionally, Professor Chang does a great job in showing a student a way to the correct answer, if they were incorrect initially.
Yes, in this class, everyone could share their opinion. And Professor Chang welcomes this different perspective.
Professor Lou often had open group discussions where anyone could share their thoughts or opinions on topics; this encouraged participation and helped more people contribute to thoughtful discussions.
Professor Lou takes care of the feeling very much and applies the suggestions from us into class activities.
The professor is very welcoming and open–minded, accepting new ideas and different perspectives from students during class discussions and presentations.
A lot of discussions and have some interesting events
It was good to have many presentations (reviews) for many famous research.
Professor Lou never puts any students down and allows students to answer questions even if they are wrong, and then nicely correct them. There were instances in which I answered incorrectly or didn't know the answer, but he did not force me to say anything I didn't want to say. He always politely explained the correct answer, which encouraged me to engage more with the class.

Instructor Comments

What constructive suggestions do you have to help Chang Lou improve this course for future students?

Comments
– Instead of starting to read and write reviews for papers from the second class, I would appreciate if the Professor spent at least a couple of weeks going through the basics of cloud system reliability. – Instead of doing reviews before every class, Professor could give us small assignments that would allow us to play around with static and/or dynamic analysis tools. Maybe Professor can substitute difficult papers with some kind of interactive assignments that involved playing with software tools.
Too much paper we need to read in the whole term. Moderately reducing the number allows us to focus more on one or two articles, giving us the opportunity to become more familiar with them. After all, reading four articles in just one week may be a bit difficult to accept all the concepts in them.
Overall I found this course great. My only suggestion is to present some background knowledge on some of the more challenging concepts (formal verification and dynamic instrumentation mostly) before the class that we discuss them. This would help to better contextualize the papers and would have made me understand the general idea of the paper better.
Great course! Really enjoyed it.
There isn't much; one minor thing is to just add more engaging group activities/games that help convey course concepts so that participation is easier. I felt like at some points students might have been confused and discouraged to answering the Professor's questions because of their complex nature. Adding more activities would help people contribute in different ways than just answering course content questions.
Maybe diversify the types of assignments and lower the workload a little bit will be better
I don't have many comments, but I would appreciate having fewer reading assignments.
Consider reducing the number of papers per week, as individuals may tend to overlook those they've already read. Alternatively, allow participants to choose one paper to focus on, encouraging a deeper understanding and facilitating more targeted questions.
Can have more game days
4 readings each week is a lot. Although all papers were interesting and I learned a lot from all of them, I think 2 readings a week would have been better so we could delve deeper into individual papers. This would make it easier for students to participate because everyone would have a better understanding of the papers discussed in class.
One recommendation that I want to make is to lessen the number of readings and reviews due each week, because having to read 4 papers is a little too much when trying to balance with other coursework. Additionally, having more hacker days for the project and in–clas activities like the Gandolf game would be great to have!