Northeastern University

Full Summer 2025

TRACE report for CY5770-01 Software Vulnerabilities (Kaan Onarlioglu)

Report prepared by **Northeastern University**
Created **Tuesday, September 9, 2025**

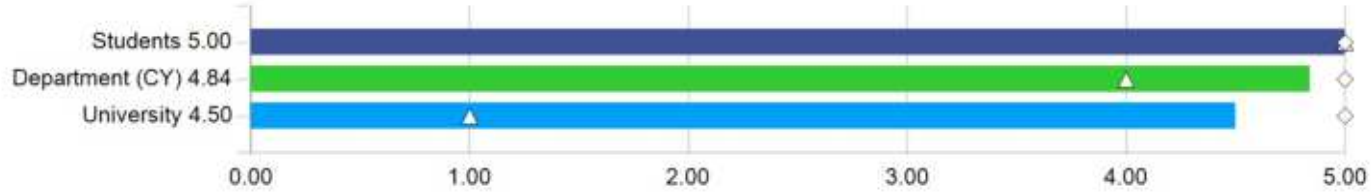
Courses Audience: **23**
Responses Received: **15**
Response Ratio: **65.22 %**
Opted out: **0**

Report Comments

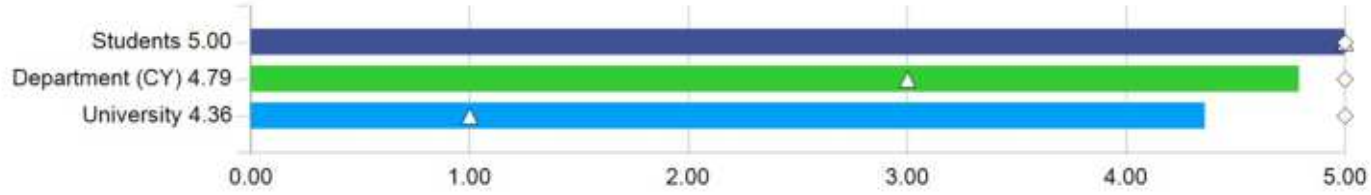
Rating Scale:
5: Strongly Agree
4: Agree
3: Neutral
2: Disagree
1: Strongly Disagree
N/A: Not Applicable

Questions to Assess Students' Online Experience

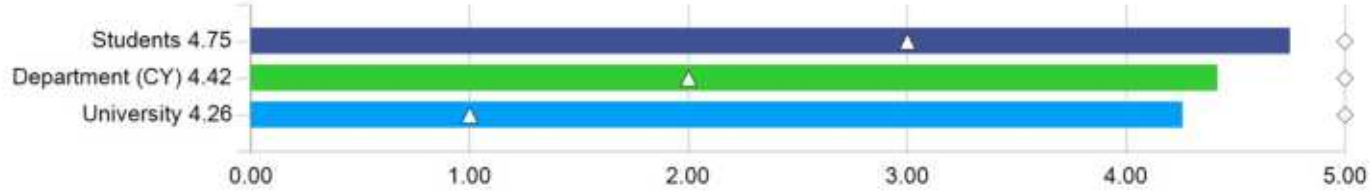
1. Online course materials were organized to help me navigate through the course week by week.



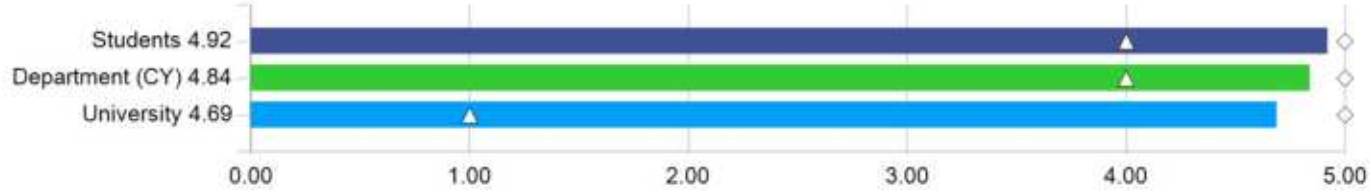
2. Online interactions with my instructor created a sense of connection in the virtual classroom.



3. Online course interactions created a sense of community and connection to my classmates.



4. I had the necessary computer skills and technology to successfully complete the course.



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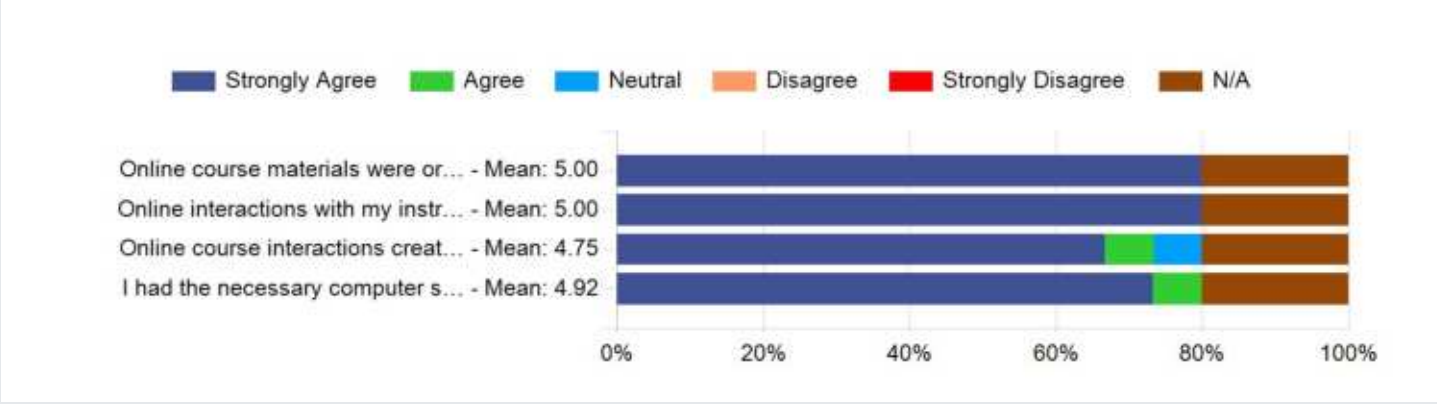
	Number of Responses	Response Rate	Course Mean	Dept. Mean	Univ. Mean	Course Median	Dept. Median	Univ. Median
Online course materials were organized to help me navigate through the course week by week.	12	52.17%	5.00	4.84	4.50	5.00	5.00	5.00
Online interactions with my instructor created a sense of connection in the virtual classroom.	12	52.17%	5.00	4.79	4.36	5.00	5.00	5.00
Online course interactions created a sense of community and connection to my classmates.	12	52.17%	4.75	4.42	4.26	5.00	5.00	5.00
I had the necessary computer skills and technology to successfully complete the course.	12	52.17%	4.92	4.84	4.69	5.00	5.00	5.00

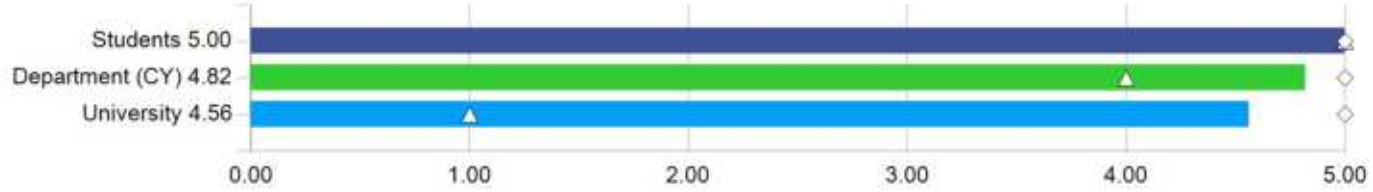


Please comment on your experience of the online course environment in the open-ended text box.

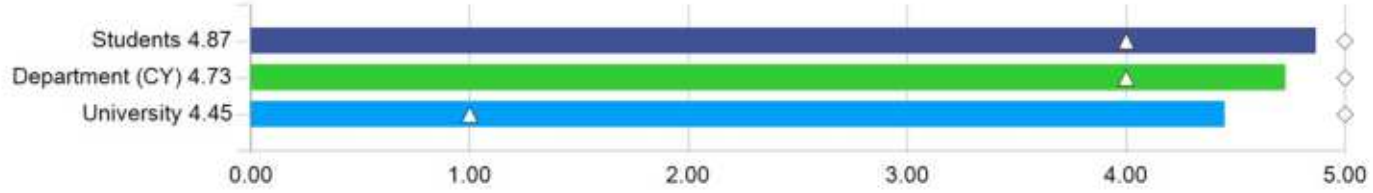
Comment
It is a must take course, needed for knowledge and mind conditioning.
I much preferred the class having its online information in Piazza rather than Canvas. It was nice to have all the class information and questions all in one place.
We primarily had offline classes, but there was one instance where we had to attend online due to maintenance in the college. The online session went smoothly without any technical issues, and it was a good experience overall.
I had fantastic experience in the course
Phenomenal Course, easily the best I've taken so far. I've been more hooked on the coursework like I was for this class.
Professor Onarliogu delivered a strong online course experience with all resources readily available and accessible as well as his support in Piazza.
I had had two sessions online one time as I was sick and another time when the professor had the class online and it was as interactive as the in–person class

Course Related Questions

1. The syllabus was accurate and helpful in delineating expectations and course outcomes.



2. Required and additional course materials were helpful in achieving course outcomes.



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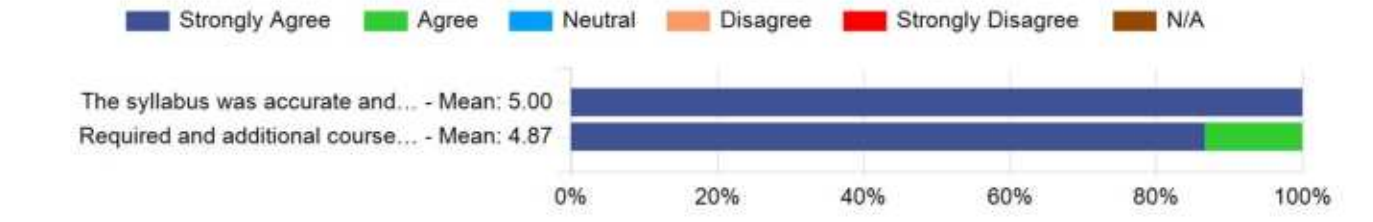
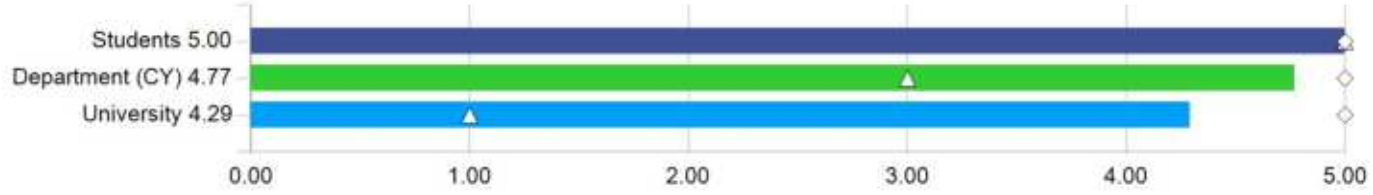
	Number of Responses	Response Rate	Course Mean	Dept. Mean	Univ. Mean	Course Median	Dept. Median	Univ. Median
The syllabus was accurate and helpful in delineating expectations and course outcomes.	15	65.22%	5.00	4.82	4.56	5.00	5.00	5.00
Required and additional course materials were helpful in achieving course outcomes.	15	65.22%	4.87	4.73	4.45	5.00	5.00	5.00

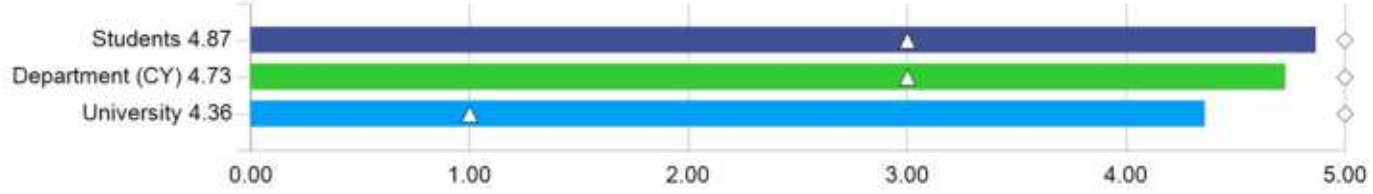


Learning Related Questions

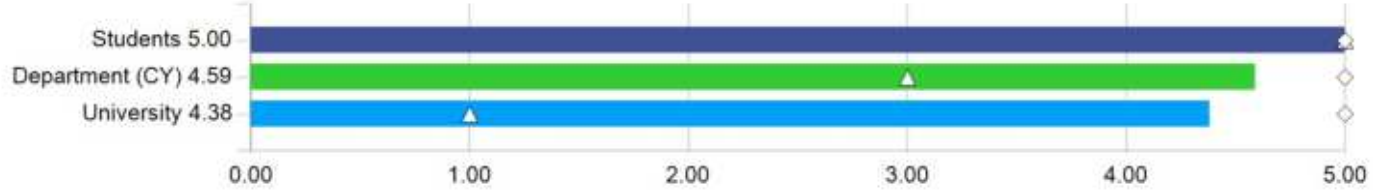
1. In-class sessions were helpful for learning.



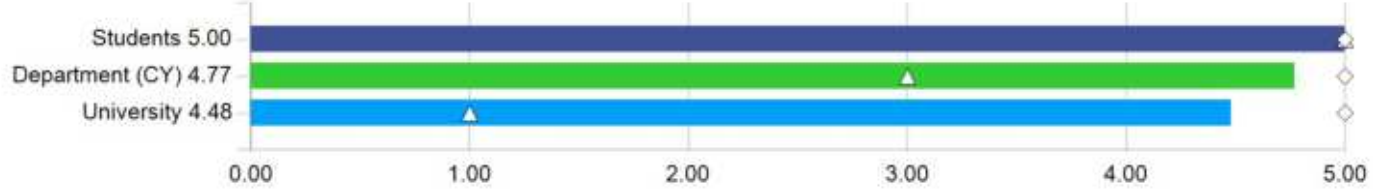
2. Out-of-class assignments and/or fieldwork were helpful for learning.



3. This course was intellectually challenging.



4. I learned a lot in this course.



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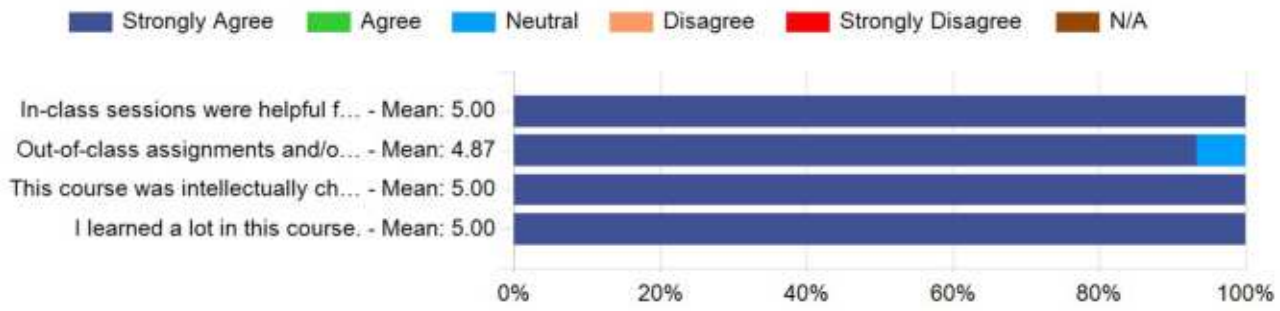
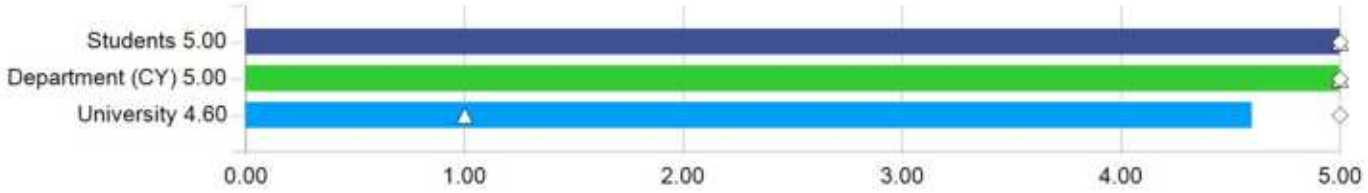
	Number of Responses	Response Rate	Course Mean	Dept. Mean	Univ. Mean	Course Median	Dept. Median	Univ. Median
In-class sessions were helpful for learning.	15	65.22%	5.00	4.77	4.29	5.00	5.00	5.00
Out-of-class assignments and/or fieldwork were helpful for learning.	15	65.22%	4.87	4.73	4.36	5.00	5.00	5.00
This course was intellectually challenging.	15	65.22%	5.00	4.59	4.38	5.00	5.00	5.00
I learned a lot in this course.	15	65.22%	5.00	4.77	4.48	5.00	5.00	5.00

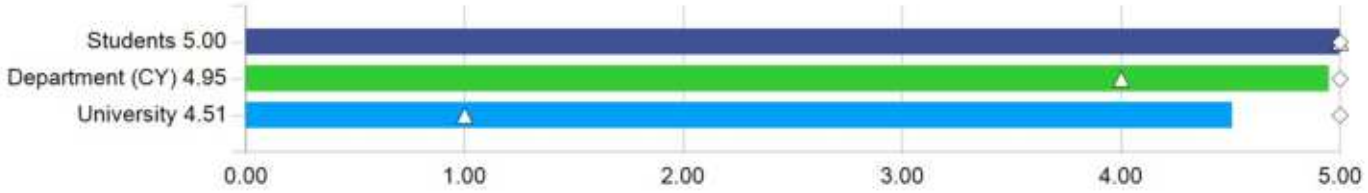


Instructor Related Questions: Kaan Onarlioglu

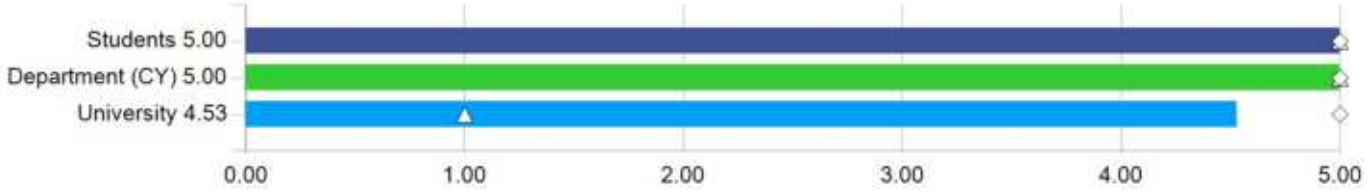
1. The instructor came to class prepared to teach.



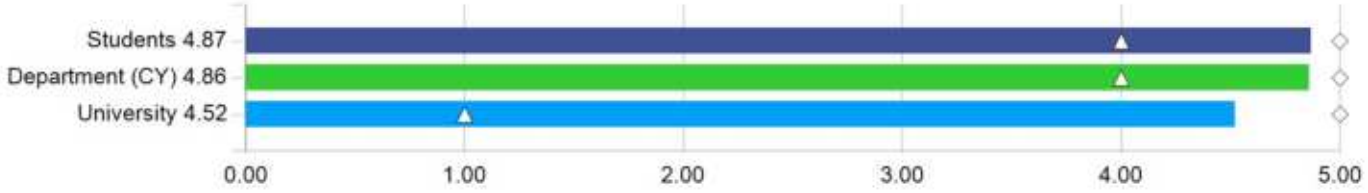
2. The instructor used class time effectively.



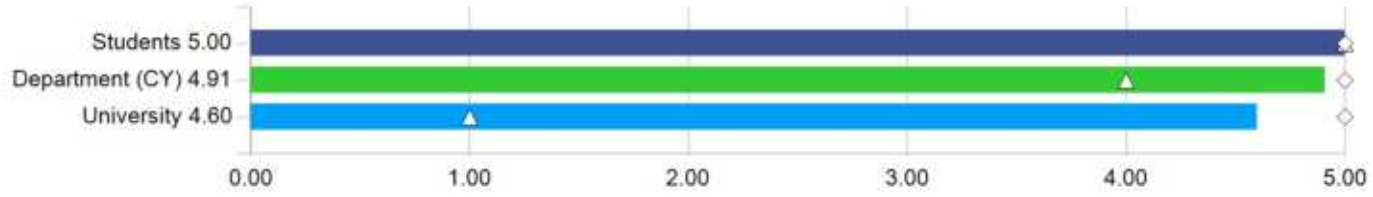
3. The instructor clearly communicated ideas and information.



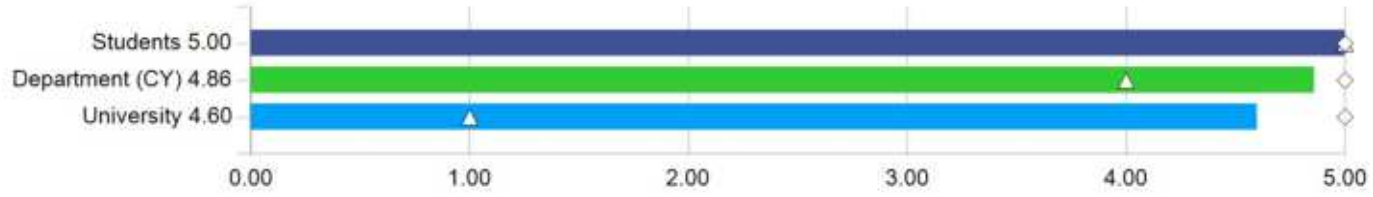
4. The instructor provided sufficient feedback.



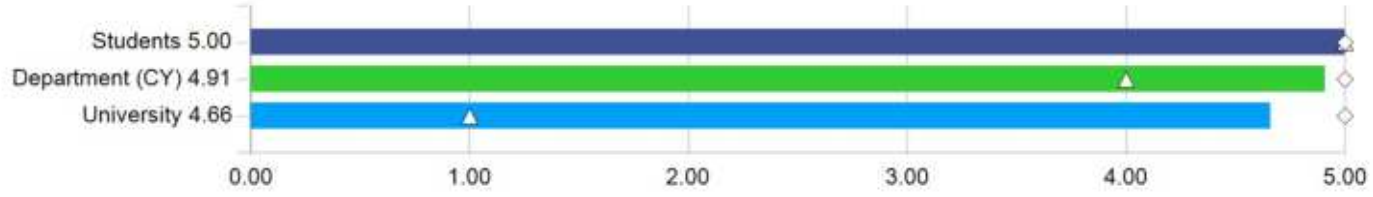
5. The instructor fairly evaluated my performance.



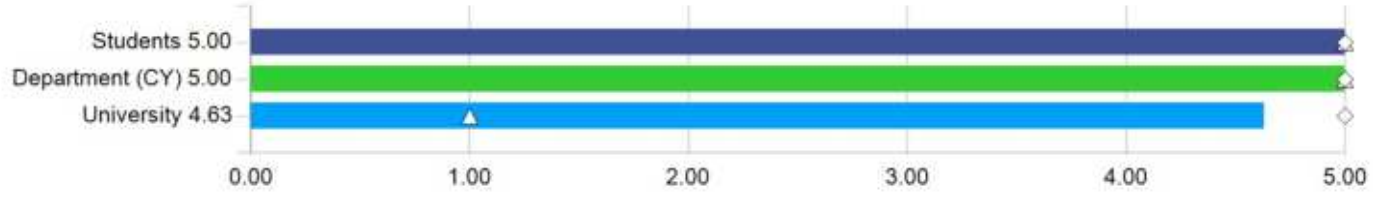
6. The instructor was available to assist students outside of class.



7. The instructor facilitated a respectful and inclusive learning environment.



8. The instructor displayed enthusiasm for the course.



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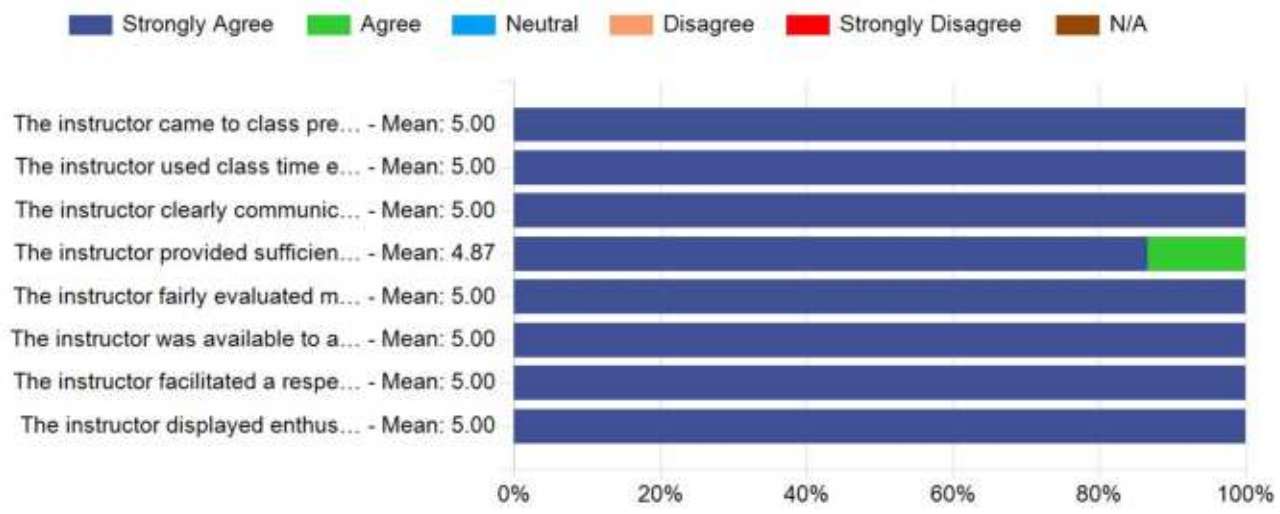
	Number of Responses	Response Rate	Course Mean	Dept. Mean	Univ. Mean	Course Median	Dept. Median	Univ. Median
The instructor came to class prepared to teach.	15	65.22%	5.00	5.00	4.60	5.00	5.00	5.00
The instructor used class time effectively.	15	65.22%	5.00	4.95	4.51	5.00	5.00	5.00
The instructor clearly communicated ideas and information.	15	65.22%	5.00	5.00	4.53	5.00	5.00	5.00
The instructor provided sufficient feedback.	15	65.22%	4.87	4.86	4.52	5.00	5.00	5.00
The instructor fairly evaluated my performance.	15	65.22%	5.00	4.91	4.60	5.00	5.00	5.00
The instructor was available to assist students outside of class.	15	65.22%	5.00	4.86	4.60	5.00	5.00	5.00
The instructor facilitated a respectful and inclusive learning environment.	15	65.22%	5.00	4.91	4.66	5.00	5.00	5.00
The instructor displayed enthusiasm for the course.	15	65.22%	5.00	5.00	4.63	5.00	5.00	5.00



What were the strengths of this course and/or this instructor?

Comment
– Deep knowledge of how things go on in real life regarding the kind of attacks and all the topics discussed in the course. – Challenging assignments and exams.
Professor Onarliogu comes to teach, he is the best professor I've had the pleasure of learning from. He is passionate about software security, and does incredibly well in designing the curriculum and challenges as well as articulating the concepts. He has a very strong understanding of the topics discussed and he delivers the material confidently.
Kaan has in depth knowledge of the subject he taught. He pushes you to think and solved critical problems. This course was really helpful to assess myself based on my knowledge to my field. A lot of hands on experience, which probably I haven't seen in most of the classes here.
Clear explanations, clear goals and outcomes to this course. Very clear in what he wants from the students
This has been the best course I have taken so far, and the professor is truly the best I have had. He made every lecture interesting and easy to follow, and the way he explained things made it easier for me to stay engaged and focused. He was always patient, supportive, and willing to help whenever we needed it. His passion for the subject really showed and made me enjoy learning even more. I felt like I actually learned and grew a lot in this course.
Mind drilling and problem analyzing and solving
I found everything we learned to be practical in a fun and exciting way. Especially software vulnerabilities that are very recent and relevant. It was fun to exploit emerging vulnerabilities. I think Kaan does a great job providing the necessary tools for you to figure out problems on your own in assignments. Assignments involve creative thinking while not feeling too obtuse or confusing.
Professor Kaan, is a highly knowledgeable expert in Software Vulnerabilities and Security, with a deep understanding of the field. His teaching is exceptional, blending theory with up–to–date industry practices. With hands–on experience, he brings real–world relevance to every lecture, making his classes truly invaluable.
One of the main strengths of this course was its practical, hands–on approach. The assignments and challenges gave us real–world experience in identifying and exploiting vulnerabilities, which made the learning process engaging and effective. The instructor was knowledgeable and explained complex topics—like buffer overflows, injection attacks, and secure coding practices—in a clear and structured way. Their prompt feedback and willingness to help students individually also made a big difference in our understanding.
When I imagined what my Cybersecurity Master's would look like, I imagined exactly this class. It helped me learn so much. The concepts we learned in class were perfectly supported by the homework. The homeworks let me apply the lessons without just stepping through some exact thing we learned in class, forcing me to truly understand certain concepts in order to do the homework.
Professor himself was a strength of this course. The way he conveyed was very good.
Prof. Kaan demonstrated a deep understanding of the topic, and his method of encouraging us to think critically rather than directly answering questions was highly effective.
Incredibly knowledgeable and knows how to teach. Easily one of the best profs I've had
Effecting teaching style, made sure to keep you thinking critically about funadmentals.
Weekly challenges were some of the best course assignments I have had during my program at Northeastern

What could the instructor do to make this course better?

Comment
– discuss more technical concepts in class that might come in handy during challenges.
N/A
I wish he provided one hint each for all the bonuses on the last day of submissions.
The pacing could be a bit slower
More topics to explore
Challenge 7 was disproportionately difficult compared to the rest of the challenges, while challenge 5 and 6 were the opposite. I think it would have been better if the challenge 5 and 6 were combined, challenge 6 became about just ASLR, and challenge 7 was combining everything with the canary + ret2lib. Having to research and implement the canary, ASLR, and ret2libc all at once was pretty difficult.
The course was already intense and well–designed, so I wouldn't suggest adding more content. However, the instructor could consider slightly slowing down during complex topics and providing more simplified explanations or quick recaps to help students keep up more easily.
I really like how the course was set up and run and can't think of any improvements.
I believe the instructor has already done that. Compared to my courses from the past two semesters, this one was significantly more engaging, hands–on, and challenging—in the best way. Making this course better seems to be making it more challenging.
Honestly there is nothing more to be done by Porf. Kaan the course is already great as it is
@ NU Give Kaan an office so that he can he can more easily host office hours, etc.
If possible, record the physical lecture as well instead of just the speaking and lecture slides so I can see where he would be pointing to in the slides. Or at least record the mouse pointing when going over slides as well. There would be times when rewatching the lecture recordings, the Professor would say "this" or "that" but I wouldn't know where on the slide he was referring to. Aside from that, his teaching style is effective.
Pretty much all good maybe I would prefer a challenge or 2 instead of 4 tests, probably because I don't like pen and paper exams. Eventually, I kind of figured out how to take on these exams and they became easier.

Please expand on the instructor's strengths and/or areas for improvement in facilitating inclusive learning.

Comment
– dedicated – deep technical knowledge – fun
See above, there are plenty strengths defined.
Instructor has a good industrial knowledge and has a good sense of humor.
Making learning approachable, and practical assignments were to do for, making learning and implementing it the best part
For accessibility, it would be nice if we had the auto transcription for recorded lectures. Sometimes I remember something important you said during one of the lectures and want to find it, and end up scrubbing through the recordings for half an hour. I can however understand why you wouldn't want to turn this feature on.
One of the instructor's key strengths in facilitating inclusive learning is the use of hands–on challenges that are directly relevant to real–world applications. These practical tasks not only reflect current industry scenarios but also accommodate diverse learning styles by encouraging active, experiential learning. The instructor also ensures that ample time is provided for each challenge, allowing students with varying levels of background knowledge and pace to fully engage with the material, apply their skills, and build confidence in a supportive environment.
The instructor did an excellent job facilitating inclusive learning. They were approachable, respectful, and made sure everyone felt comfortable asking questions and participating. There's nothing I would suggest improving in this aspect.
The instructor did a really good job of balancing concepts learned in class and application in the homework and even set class time up to facilitate this. Having the opportunity and dedicated time to ask questions in person at the end of every class really helped.
Honestly, after listening to Professor Kaan, I truly felt like I was stepping into the world of Cybersecurity. His teaching style, blending real–life scenarios with hands–on tasks—was incredibly engaging and challenging. What I appreciated most was how he brought theory to life by demonstrating concepts in a practical way during lectures, which makes easier to understand. For improvement – I don't know it is correct or not because I know I was not that bright student in class, but it would be more helpful if more resources or references would be provided by the professor because sometimes it was difficult for me to catch up the professor's speed.
Professor Kaan didn't just teach the course, he fundamentally changed the way we think. His approach encourages deep reflection and critical analysis rather than rote learning. The assignments and challenges he designed were some of the most engaging I've encountered; they pushed us to apply concepts creatively and think beyond the classroom, making the learning experience both inclusive and intellectually stimulating
He'd provide time outside of class if students needed extra help. Made sure to stay engaged with students to make sure they understood everything and werent just listening to him lecture.

Instructor Effectiveness: Kaan Onarlioglu

What is your overall rating of this instructor's teaching effectiveness?

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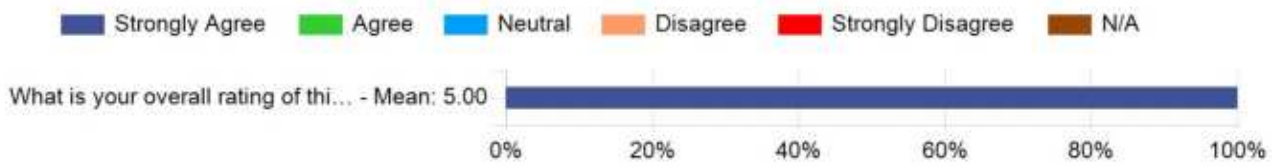
What is your overall rating of this instructor's teaching effectiveness?

Number of Responses	Response Rate	Course Mean	Dept. Mean	Univ. Mean	Course Median	Dept. Median	Univ. Median
15	65.22%	5.00	4.91	4.60	5.00	5.00	5.00

What is your overall rating of this instructor's teaching effectiveness?



Demographics

How often did you attend this class both in-person and remotely?		
80-100%	15	100.00%
60-80%	0	0.00%
40-60%	0	0.00%
20-40%	0	0.00%
1-20%	0	0.00%
Total	**15**	

The number of hours per week I devoted to this course outside scheduled class meeting times.		
More than 10	6	42.86%
8-10	5	35.71%
5-7	3	21.43%
3-4	0	0.00%
0-2	0	0.00%
Total	**14**	

Student Self-Assessment of their Eff ort to Achieve Course Outcomes

What I could have done to make this course better for myself.

Comment
I think I could have utilized Piazza more, rather than saving most of my questions for office hours.
To make the most of this course, I could have spent more time practicing hands–on challenges outside of class, such as working on Capture the Flag (CTF) problems or exploring real–world vulnerabilities in safe environments. Reviewing lecture materials more consistently and diving deeper into tools like Ghidra, Burp Suite, and Wireshark would have also strengthened my understanding. Participating more actively in discussions and seeking clarification on complex topics sooner would have helped me engage better with the material.
I wish I had more time to really focus on the homework challenges this summer.
Maybe have more prior knowledge and strong foundation could help me
I cant think of anything to make it any better.
If possible, record the physical lecture as well instead of just the speaking and lecture slides. Or at least record the mouse pointing when going over slides as well. There would be times when rewatching the lecture recordings, the Professor would say "this" or "that" but I wouldn't know where on the slide he was referring to. Aside from that, his teaching style is effective.
Put in more time and effort to understand the basic and core concepts.
Started some of the assignments a little earlier
I could have started the challenges early on and focused on completing the bonuses.