

Software Vulnerabilities (Full Summer 2023)

Instructor: **Onarlioglu, Kaan**
 Subject: **CY**
 Catalog & Section: **5770 01**
 Course ID: **51700**
 Objectives:

Enrollment: **31**
 Responses Incl Declines: **24**
 Declines: **0**

Questions to Assess Students'™ Online Experience

Question	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.	24	77%	4.9	4.9	4.2	5.0	5.0	4.0
Online interactions with my instructor created a sense of connection in the virtual classroom.	24	77%	4.7	4.7	4.1	5.0	5.0	4.0
Online course interactions created a sense of community and connection to my classmates.	24	77%	4.6	4.6	4.0	5.0	5.0	4.0
I had the necessary computer skills and technology to successfully complete the course.	24	77%	4.7	4.7	4.5	5.0	5.0	5.0

Note: 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; 1:Strongly Disagree; -1:N/A;

Course Related Questions

Question	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.	24	77%	5.0	5.0	4.4	5.0	5.0	5.0
Required and additional course materials were helpful in achieving course outcomes.	24	77%	4.8	4.8	4.2	5.0	5.0	4.0

Note: 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; 1:Strongly Disagree;

Learning Related Questions

Question	Number of Responses	Response Rate	Course Mean	Dept. Mean	Univ. Mean	Course Median	Dept. Median	Univ. Median
In-class sessions were helpful for learning.	24	77%	4.9	4.9	4.2	5.0	5.0	4.0
Out-of-class assignments and/or fieldwork were helpful for learning.	24	77%	4.9	4.9	4.1	5.0	5.0	4.0
This course was intellectually challenging.	24	77%	4.8	4.8	4.4	5.0	5.0	5.0
I learned a lot in this course.	24	77%	5.0	5.0	4.3	5.0	5.0	5.0

Note: 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; 1:Strongly Disagree;

Instructor Related Questions: Kaan Onarlioglu

Question	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.	24	77%	5.0	5.0	4.3	5.0	5.0	5.0
The instructor used class time effectively.	24	77%	4.9	4.9	4.3	5.0	5.0	5.0
The instructor clearly communicated ideas and information.	24	77%	4.9	4.9	4.2	5.0	5.0	5.0
The instructor provided sufficient feedback.	24	77%	4.9	4.9	4.2	5.0	5.0	5.0
The instructor fairly evaluated my performance.	24	77%	4.9	4.9	4.3	5.0	5.0	5.0
The instructor was available to assist students outside of class.	24	77%	5.0	5.0	4.3	5.0	5.0	5.0
The instructor facilitated a respectful and inclusive learning environment.	24	77%	4.8	4.8	4.4	5.0	5.0	5.0
The instructor displayed enthusiasm for the course.	24	77%	5.0	5.0	4.4	5.0	5.0	5.0

Note: 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; 1:Strongly Disagree;

Instructor Effectiveness: Kaan Onarlioglu

Question	Number of Responses	Response Rate	Course Mean	Dept. Mean	Univ. Mean	Course Median	Dept. Median	Univ. Median
What is your overall rating of this instructor's teaching effectiveness?	24	77%	5.0	5.0	4.3	5.0	5.0	5.0

Note: 5:Almost Always Effective; 4:Usually Effective; 3:Sometimes Effective; 2:Rarely Effective; 1:Never Effective;

Instructor Related Questions: Kaan Onarlioglu (46 comments)

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

- 1 Kaan is maybe one of the best professors that Northeastern has. He teaches a challenging course but is incredibly dedicated to accommodating students so that they can learn and succeed. He is clearly very smart and passionate about the subject,
- 2 You won't believe me but he answers your queries on piazza even at 4 am !!!
- 3 Professor helped in understanding the concepts from base and provided videos of the lecture that helped to understand the concept better.
- 4 This course isn't flipped - this course is structured. Lectures were very pertinent to topics I had to look up to "real" problems. Keep the structure, force thought, it works.
- 5 The course structure was challenging, very well done and it covered a variety of concepts. I loved the way professor Kaan gamified the whole process with a leaderboard system so students could have an idea of where they stand among their peers. Lecture delivery, preparedness for lectures, the feedback given in class and grading were unlike any other professor I have come across.
- 6 Incredibly passionate and highly skilled security architect/engineer that brought a lot of energy to class while also maintaining an environment that fosters questions and discovery
- 7 Covers a lot of material and important topics. Real life examples and industry knowledge are offered. Regardless of reason for taking the course, this class will make you a better thinker, problem solver and increase your awareness around security and good design
- 8 Kaan is a great professor who is very clearly passionate both about teaching, and the course content itself, and that made this a very fun course to take. He stayed late in office hours, and always helped students that were struggling. Also, he really took into account the various levels of experience students in the class had. He also explained the concepts in a way that broke them down and helped you to understand them.
- 9 A clear understanding of concepts, a highly educated individual in the field of security
- 10 The instructor did an amazing job covering a wide variety of material. His teaching style made even the less interesting material interesting to learn.
- 11 Very well structured and great delivery.
- 12 Instructor was very strong in all matters relating to the course and beyond.
- 13 The professor is passionate about what he teaches which made learning from him very engaging.
- 14 The arch Linux environment helps students tremendously with getting hands-on exploit experience. A lot of effort went into it, and it is an invaluable resource in the class.

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

15 Kaan clearly deeply cares about the course subject as well as doing what he can to ensure that all students have an equal opportunity to understand the massive amount of information shared in lectures. He responds almost immediately, at all hours, to Piazza posts, and provides quiz and exam grades within 12 hours. He is stern but fair.

16 extremely knowledgeable in security domain

17 Kaan is the best professor I've had at Northeastern. He is hilarious, great at teaching, and great at answering questions. The challenges are fun and educational. Take this class.

18 This is a challenging course that provides "hands-on" interactions with software security concepts.

19 very knowledgeable and presentation was understandable and answered questions throughout the presentation

Q: What could the instructor do to make this course better?

1 I would like more in-class examples or resources. I know that there is not a ton of information online about this stuff, but examples could still be provided. Also find a way to gesture to the screen in a way that is recorded, move the mouse or something when referring to a diagram.

2 Nothing

3 Prep the TA's a little bit more. There were some pieces of advice that actually hampered getting assignment's done.

"You're using python?!?!". . . the assignment *said* we could?

4 The course and challenges are in the best shape they can be!

5 Honestly no idea.

6 None - Great Lecturer. Forced students to think for themselves and problem solve, which is necessary for successful outcomes.

7 Sometimes, the class would get derailed by irrelevant questions, and I think it could have been a stronger lecture if the professor had a time at the end for those types of questions or something, instead of addressing them mid-lecture. I also think that we spent a lot of time on bad examples or what not to do, that it would have been nice to see some good examples too. I also wish we spent more time on threat modeling. I feel like it would have been nice to learn about that earlier, then we could apply those ideas to the challenges and think about it in context of the challenges. Also, I know it's all probably necessary, but there were so many assignments and quizzes/exams that sometimes it felt like there wasn't enough time to let the course material sink in until the 2nd half of the course. It felt a bit like the first half of the course was a lot of information and assignments in a very short amount of time, but after the midterm it calmed down a bit, and then the concepts could actually sink in. Not sure how this could change, but something about the pacing of the course maybe.

8 Nothing

9 More live demos

10 Having office hours scheduled throughout the semester. Online OH are generally easier to attend and therefore more preferable

11 Having a course book or written materials would greatly help. Slides are good, recorded lectures are better, but a coursebook would be best. There were moments where I had to return to the recorded lectures over and over and over again until I understood a complicated point, or found a nugget of information required to complete a course challenge.

12 Nothing. the course is perfect

13 Nothing.

14 The need for strong coding skills was noted in the syllabus sent to students before the start of the class. However, it might be beneficial to note that strong C coding skills (or the willingness to delve deeply into C) is a more specific prerequisite.

15 I review online recording even after I went to the live class and noticed that when he points to the slide live in class with a laser pointer, it hard to know what he's pointing at when I rewatch the recording. If he reference the object he's pointing to as this and that, it ambiguous as to what is being pointed to. For more clarity to people watching later, when pointing to something, maybe say out the name of the object to get it on the recording what's being highlighted with the laser pointer

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

1 See above

2 Nothing

3 Honestly, I hope Kaan can write a book about the subject. I understand the reason why *not* to, but it would be great to have a some reference I can read. The slides lectures are great, but sometimes reading is nice.

Though, again, totally understandable why not.

4 1000% facilitated inclusive learning.

5 Professor Kaan really cares about his students and their performance in the course. An instance of this was I reached out to professor for some help with a challenge on a weekend afternoon and I was honestly surprised when he got back to me within fifteen minutes of me posting the question, that is how committed he is to his students! He keeps students informed well in advance about all things logistics as well as other details they need to be wary of with respect to challenges. The warhead environment was my favorite part of the course, it had everything that was needed for the course and the automatic grading was an icing on the cake.

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

- 6 Always available to provide feedback and support and guidance while still challenging us- no hand holding!
- 7 Best instructor at NEU. Amazing lecturer. Brings industry knowledge to the class. Forces students to think for themselves - no hand-holding. The challenges will make you a better engineer from the standpoint of - thinking outside of the box, utilizing tools you have little to no knowledge of, forcing you to analyze a program or website and understand the design flaws so that it can be exploited.
- 8 Kaan encourages asking questions and getting answers from students, and if you are wrong or ask a bad question (and there are bad questions [i.e., public Piazza posts that can be resolved via a quick Google search]), he will not hesitate to let you know; this helps to improve how students think and reason about a domain that requires nuance.

Incoming students should know to ask Google, get whatever information they can from their searches, and then pose questions and demonstrating that they have done the required research.
- 9 Nothing
- 10 The professor made taking a very challenging course possible by breaking down the challenges and always offering support if anyone asked for it.
- 11 I think he is already delivering a best version of himself
- 12 This is a seriously great class with an amazing professor. I learned a ton, not just about security but about many aspects of computer networking and software development. TAKE THIS CLASS WITH KAAAN. He made a 3 hour 6pm class exciting to attend.

Questions to Assess Students' Online Experience (12 comments)

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

- 1 Piazza was solid, always very responsive.
- 2 Awesome
- 3 The class was well organized and it is the best class.
- 4 Kaan made it very apparent the computer skills you need at the beginning of the course to be successful. Were we meant to be a community? No. But were questions answered through piazza and were all needed materials accesable through the provided servers? Absolutely.

Most importantly, did I want another online community forced upon by the handed down practices of an administration out of touch with the student body? Nah - I just wanted to do good in the class and Kaan made that possible.
- 5 Professor Kaan was super accessible on piazza and Warhead was a really nice way to access course material and submit challenges. I wish more courses in the program used an environment like this where grading happens instantaneously.
- 6 It was a very well made environment, materials were clear and simple to retrieve.
- 7 This was an in-person course however the professor made the recording of each lecture available to us which made it helpful to go back and revisit parts of the lecture.
- 8 Course was in-person. However, the professor recorded lectures and made those available; the recorded lectures were critical to success in this class because of the volume of information shared during lectures.
- 9 Extremely good. everything was organized.
- 10 Kaan and TAs were very responsive on Piazza when you asked questions. It was very helpful that the professor recorded all lectures so I could re-watch them later when I was confused.
- 11 The Piazza page was useful, no issues.
- 12 The lecture recordings are useful for reference when studying for exams and doing the assignments.

Student Self-Assessment of their Effort to Achieve Course Outcomes (11 comments)

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

- 1 Had a background in cybersecurity or at least systems or something.
- 2 Start assignments early.
- 3 Spent a little bit more time in class. But you know what - I spent a good amount of time in class.

Honestly, time wise, least amount of hours spent in a CS class (i know, it's CY) but best hours spent in a CS class. Did I want to spend HOURS of my life writing unit tests for PDP? Nope. Did I want to spend HOURS of my life understanding how to use GDB? A bit more, yes.
- 4 I could have started working on the challenges a bit earlier.
- 5 Do prior research on CTF challenges- they prepare you for how to attempt the class challenges

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

6 Taken prerequisites: Computer Systems, Operating Systems.

I think all Khoury students should take this class, but they should also have a firm understanding on system architectures and operating systems.

7 Reading all the research papers given by kaan

8 I wish I had learned more linux and networking before I started the course.

9 Do more outside reading to complement what we learn in class. I also could have done the bonus activities but my schedule didn't allow it.

10 More C experience prior to the class would have been helpful for me.

11 come in knowing more about what kind of programming language the class required so that I didn't have to spend too much time studying programming language just to complete the assignment