University of Michigan Winter 2025 Midterm Instructor Report EECS 498-005: Special Topics Nicole Hamilton

32 out of 38 students responded to this midterm evaluation.

Responses to questions related to the course:

	SA	А	Ν	D	SD	N/A	Median
I am learning a great deal in this course. (Q966)	22	10	0	0	0	0	4.77

Responses to questions related to the instructor:

	SA	А	Ν	D	SD	N/A	Median
Nicole Hamilton is enthusiastic. (Q114)	23	8	1	0	0	0	4.80
Overall, this is an excellent course. (Q964)	22	9	1	0	0	0	4.77
Overall, Nicole Hamilton is an excellent teacher. (Q965)	21	8	3	0	0	0	4.74
Nicole Hamilton acknowledges all questions insofar as possible. (Q968)	23	9	0	0	0	0	4.80
Nicole Hamilton uses techniques to foster class participation. (Q972)	18	13	1	0	0	0	4.61
Nicole Hamilton is willing to meet and help students outside class. (Q975)	27	3	0	0	0	1	4.94
Nicole Hamilton keeps students informed of their progress. (Q977)	19	9	3	0	0	1	4.68

I think this class may help me get a job.



Splitting things up as a team, I don't code everything myself but I'm still learning how everything works.



Working on a team of 6 or 7 is really cool and not like any other class.



Written Comments

What are the major strengths of this class? What is helping you to learn? (Q979)

Comments

Professor Hamilton is a great professor and makes the class really fun. She is extraordinarily knowledgeable on the subject matter.

I think that the broad range of topics combined with the specific subject matter is good material for a capstone class.

Really cool teacher who loves to answer questions

How much Prof Hamilton is willing to extend her work to help students do well in the class.

I really appreciate the homework assignments as a starting spot for specific aspects of the engine.

the scope of the project is large and challenging, which in turn challenges me to learn alot.

Major strengths is how it mimics a real world project environment very well, and how her very broad and knowledge on the subject helps us learn very well.

I believe the greatest strength of this class is the experience Nicole shares from working on a search engine and the feedback she has based on the development she did while on the search engine team.

The class is very well formatted, introduces search engine concepts well and has complimentary assignments that give a chance to practice skills taught in lecture. Overall, the slides are useful, and the structure of the class has been very helpful.

The coding assignments are helping me learn. I learn best through practical examples and the assignments are a good way for me to learn more.

This course covers topics far exceeding what was expected when selecting this course while also making the workload and learning feel easy and manageable. By no means in the course too easy, but the quality of instruction and resources make it

To me, the major strengths of this class include learning a lot of c++ and getting some experience of what it feels like to be on an actual team of coders where you are writing a fraction of the code base. The in class examples are very useful in helping me learn how to apply what we are learning to the real world.

relaxed, self-paced, content interesting, cultivated a good collaborative atmosphere.

This is a class I've been wanting to take ever since I enrolled at UM, so I'm very happy to see it back. First and foremost, I think the project is probably more ambitious and impressive than any other MDE I know of, which is great for students' resumes. Also, I love the open–endedness of this class; there is quite a bit of freedom to implement the features we want, how we want them.

The homeworks are very helpful to figure out the more complicated parts of the engine. Also, the speed dating / group photos / project plan and everything related to team building were great in helping form good teams and build rapport.

Putting what we've learned so far into practice.

Assignments are helpful.

This class makes it so that we have to, as a group of students, come up with an understanding together about a project with a lot of moving parts, decide how to organize a workflow, and design an efficient solution while laying out all the ideas on the table. It's helping me learn the ways of real–world industry software engineering, and I'm really grateful for that opportunity.

Getting to work with low level linux

Unique, fun topics

Teaches you about system design and C++ features

The autograded assignments provide a good starting point for various components of the search engine system while providing guidance on whether you've implemented them correctly.

The class allows you to explore aspects that you are interested in and also encourages us to put in a lot of effort and learn tools that we will actually use in our jobs.

The small assignments help us get better guidelines for the search engine.

Teams of 6, most of my other EECS classes project group size are 1–3. The teams of 6 are also more aligned with industry team sizes.

Design and implementation of a semester long, large and complex project. A larger project means more focus on system design, scalability, and maintainability, instead of in other EECS classes where you're just implementing a small feature set for learning.

Instructor has lots of real-world industry experience in building large-scale systems and system design.

Actively building something complex over a semester is helping me learn.

How can Nicole Hamilton improve this class? If possible, give specific examples. (Q980)

Comments

If it was possible to have other staff involved ---- i.e., IAs ---- it would be very helpful.

Somewhat more structure and guidance on the project. Although it is supposed to be open ended.

It's a bit hard at times to judge if my group is behind where we are supposed to be on the project. A bit more clear expectations of where the engine should be at certain weeks would help.

The lecture content can be hard to follow at times, as we tend to get in the weeds with implementation details instead of learning higher level concepts.

There are no ways i can think of

More structured lectures with more emphasis on the specific concepts that will help us on our project. In addition, going more in depth with concepts for those who have not taken eecs 482.

A few of the assignments where you would expect a defined output are ambiguous or missing a detailed spec sheet. Some assignments are broad but the auto-graded ones need to be more defined.

I think the only thing I would improve about the class would be making the exam questions more clear on the type of response wanted. For some of the questions I responded in a generic way that would be considered "correct" in another class since I mentioned the main idea just to find out I needed to include n specific details about how to exactly step by step do the thing. Other than that I love the way the class is taught and I am learning a lot!

more guidance on how to write good C++ code

I sometimes wish the class would tell us less about how to do everything. As Prof. Hamilton has acknowledged in class, there is a danger that by making every team do the same autograded assignments, teams' engines will be very similar, as a lot of the work will have already been done for them (e.g., certain design decisions regarding the index, how to handle different HTML tags). Also, like many students, I disagree with the ban on the C++ standard library. I can understand wanting students to understand everything they're building, but this seems like a bridge too far.

Some of the lectures repeated a bit more material than I would have liked, but then again it's nice to review stuff. Also, having IAs would of course improve the course a lot, and it would also be nice to have the Google cloud accounts guaranteed.

no improvement suggestions :)

A lot of the lecture topics have been too simple such as http or multithreading while other topics which are new for everyone felt rushed like ISR and the index

N/A

Great support and practical advice

More focus on OS topics for non-482 people. (threads)

Please enter any additional comments you have for Nicole Hamilton. (Q981)

Comments

You're probably the coolest professor I've had :)

Different from most every other teacher I've had. Can be frustrating at times, but overall zany and fun, feels like she's available and personable

I really love how engaging you are with the students and how you connect new topics to applicable things I've never thought about before. For example, preorder, inorder, postorder traverseals-I'd never thought of applications for them beyond just leetcode/data structures and algorithm classes, but you gave that insight to us.

I think there was value in rebuilding the hash table DS, but redoing string, vector, etc felt like a poor use of my time and didn't include meaningful design decisions. Also, sometimes when people are trying to ask questions or raise concerns, you try to infer what they are asking or finish their sentence instead of letting them finish, which makes it hard for them to adequately express themselves.

N/A

What's been the most interesting part of the class so far?
Comments
Working in a large team is like working in a team in industry, based on my internship experiences.
Learning about old-school computing techniques and systems.
I think the concept of a bloom filter is really cool
Understanding different constraints of the search engine
It's interesting how much of the overall direction of our engines is up to our discretion. Definitely a fun change of pace to have so much freedom in a project!
Learning about ranking.
Lectures have bene very insightful
Working in teams of 6.
I've loved the introduction to lower level code, including memory mapping, POSIX pthreads, and sockets. Additionally, the class makes building a search engine easier, as the process is broken down into several distinct components, and overall this makes the project more intuitive.
I like the operating systems portion of the class.
All of the strategies to take such a complex problem and to break it into manageable chunks
The most interesting part of the class so far was learning how the inverse index works.
just general information retrieval concepts
The anecdotes from Microsoft and other tidbits of search engines / computing history. Also learning the Linux interface.
Learning about web standards and how they've been shaped/changed overtime. Also seeing how different techniques have risen based on problems with earlier techniques, even though those earlier techniques, at the time, seemed like the best solution.
Learning about linux syscalls
Learning the new topics for making a search engine
Learning about the constraint solver and ISRs
The autonomy granted to us to work on our search engine system with our own design at our own pace
I have loved the system design aspect of this course and haven't gotten that anywhere else.
Actually being able to see parts of code come together to create a search engine is fascinating.

system design and thinking about how to optimize for speed and efficiency

Which of the autograded assignments have been most helpful?

Comments
The string and vector assignments.
Hashtable/Hashblob helped me learn a lot
HTML Parser
Definitely HTML parser. I also think the three Linux ones (GetUrl, GetSsl, TinyServer) were also very helpful as I didn't have much of any previous experience with network development.
The html parser assignment
html parser
HTML Parser
Any of the ones involving memory mapping (UTF-8 encoding and HashBlob, for example).
The assignments that will be part of the final search engine eg htmlparser
Definitely the HTML Parser even if it was the hardest
I think the utf-8 assignment was the most helpful for me since it was very hard for me to understand during lecture.
getting down to bare bits in hashblob helped, linuxUrl / Ssl helped w/ networking stuff
The HTML parser was one of the most helpful, as well as the three Linux server utilities, which are hard to write without any prior networking knowledge.
They are all helpful.
Multithreaded file operations, HTML parser, HashBlob
All of them are pretty fun
Basically all of them are useful and applicable.
The HTML parser
The HashBlob Assignment was very helpful.
UTF-8, Linux server assignments
All of them except for string/vector