

CSS 430 B
Operating Systems
Course type: Face-to-Face

Evaluation Delivery: Online
Evaluation Form: T
Responses: 45/47 (96% very high)

Taught by: Yusuf Pisan
Instructor Evaluated: Yusuf Pisan-Assoc T Prof

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Median 4.2 (0=lowest; 5=highest)
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Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.7 (1=lowest; 7=highest)
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SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK Inst	College
The course as a whole was:	44	27%	55%	9%	5%	2%	2%	4.1	4	5
The course content was:	44	30%	41%	20%	5%	2%	2%	4.0	3	5
The instructor's contribution to the course was:	44	57%	30%	7%	2%	2%	2%	4.6	5	6
The instructor's effectiveness in teaching the subject matter was:	44	41%	39%	11%	5%	2%	2%	4.3	4	5

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median	DECILE RANK Inst	College
Relative to other college courses you have taken:											
Do you expect your grade in this course to be:	44	9%	16%	25%	41%	5%		5%	4.5	2	3
The intellectual challenge presented was:	44	30%	45%	18%	7%				6.0	8	7
The amount of effort you put into this course was:	44	41%	27%	20%	11%				6.2	8	8
The amount of effort to succeed in this course was:	44	43%	30%	11%	16%				6.3	8	8
Your involvement in course (doing assignments, attending classes, etc.) was:	44	34%	32%	18%	14%	2%			6.0	7	7

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 11.1 Hours per credit: 2.2 (N=44)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
			11%	20%	23%	14%	16%	9%		7%	

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 9.1 Hours per credit: 1.8 (N=44)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	2%	20%	11%	20%	20%	7%	14%	2%		2%	

What grade do you expect in this course?

Class median: 3.3 (N=44)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
11%	30%	23%	20%	5%	2%	7%						2%		

In regard to your academic program, is this course best described as:

(N=44)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
64%	27%			9%	

STANDARD FORMATIVE ITEMS

	N	Strongly agree (5)	Agree (4)	Neither agree or disagree (3)	Disagree (2)	Strongly disagree (1)	Median	DECILE RANK	
								Inst	College
The instructor explained the learning outcomes/objectives for this class.	44	43%	50%	5%		2%	4.4		
The syllabus listed the learning outcomes/objectives for this class.	44	41%	52%	5%		2%	4.3		
The overall organization of the course made it easy for me to learn the course concepts.	44	39%	50%	9%		2%	4.3		
Course activities and assignments helped me achieve the learning outcomes/objectives for this class.	44	32%	59%	7%		2%	4.2		
Course materials (e.g., textbook, other readings, lecture, Canvas site) helped me achieve the learning outcomes/objectives for this class.	44	34%	55%	7%	2%	2%	4.2		
The instructor clearly explained how course activities and assignments related to the learning outcomes/objectives of this course.	44	48%	41%	9%		2%	4.4		
My perspective was valued by the instructor.	43	42%	47%	9%		2%	4.3		
The instructor clearly communicated their expectations for respectful communication and interaction in the course.	44	50%	43%	5%		2%	4.5		
The instructor created a class environment where I felt valued and respected.	44	52%	41%	5%		2%	4.5		
The instructor ensured that course materials (e.g., textbook, other readings, lecture, Canvas site) were accessible.	44	50%	41%	7%		2%	4.5		
I felt I was a valued member of the class community in this course.	44	45%	45%	7%		2%	4.4		
Course activities and assignments provided opportunities for me to critically analyze/reflect on new ideas and concepts.	44	50%	43%	5%		2%	4.5		
I was an active and engaged member of the class community.	44	20%	57%	20%		2%	4.0		
The structure of the course gave me enough time to understand and process the ideas and concepts presented in class.	44	32%	55%	11%	2%		4.2		
The instructor regularly provided time and space for students to ask questions and clarify ideas and concepts.	44	52%	41%	5%		2%	4.5		
I had the opportunity to engage with other students.	44	48%	43%	7%		2%	4.4		
The instructor provided opportunities to practice and apply course ideas and concepts before assignments and/or tests.	44	43%	48%	7%	2%		4.4		
Course assignments enhanced my understanding of the course ideas and concepts.	44	39%	55%	5%	2%		4.3		
Feedback on assignments helped me to better understand and/or apply course ideas and concepts.	43	33%	51%	9%	5%	2%	4.2		
Course activities and assignments provided opportunities to demonstrate my learning of course ideas and concepts.	44	41%	52%	5%	2%		4.3		
The instructor clearly communicated what students needed to do in order to be successful in the course.	44	43%	50%	5%	2%		4.4		
I learned ideas and concepts in this course that will be useful for me in other courses and/or after graduation.	44	36%	43%	16%	2%	2%	4.2		
I learned skills in this course that will be useful for me in other courses and/or after graduation.	44	39%	43%	14%	2%	2%	4.2		
The instructor effectively explained the relevance of the course ideas, concepts, and skills covered in this course.	43	42%	44%	12%	2%		4.3		

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STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. yes it was. In-class activities and programming assignments urge our thinking and applying lectures to them.
2. It was intellectually stimulating. I was challenged with a lot of new complex concepts that I have not learned before.
3. Much like CSS 422, this class stretched my thinking in regards to what really goes on under the hood of a computer, and even gave me a better understanding of how pointers work in C.
5. This class was intellectually stimulating and did stretch my thinking. The reason being it forced me to think in new and abstract ways of solving problems I never encountered before.
6. Yes. I got to connect my hardware course learning to this course.
7. Yes, this class was very helpful with learning about operating systems. I appreciated the practices we went over during class together, and it was very helpful doing a walkthrough of the code portions. Moreover, the 10 minute breaks were really appreciated as many professors do not do that. Lastly, I appreciated how we went over the programming assignments and left time for questions. Some of the topics were a little confusing and lots of lecture slides makes it really difficult to absorb any information at a certain point, but otherwise do not have complaints.
8. Yes.
9. Very. It is a vast and difficult course, we get exposure to many difficult concepts and we learn a lot about how operating systems function.
10. Yes, very many assignments that forced thinking and analyzing.
11. I think this class was intellectually stimulating because the assignments were difficult enough however there was still support from other classmates which was good.
12. Yes, very much so. I worked with topics that I had never seen before and was able to create projects based on those topics not so long after which is something at the beginning of the class I did not think was going to be possible.
13. Yes; Yes; I got to learn more about what goes on inside of a device & how parts of an OS work.
14. Yes
15. Yes, because need problem solving skill
16. Yes, there were a lot of new concepts to apply
17. Yes. It made me think about how operating systems work, and how complicated they are
18. Yes, it built upon knowledge from previous courses and improved my existing skillset.
19. Yes, it was intellectually stimulating and it did stretch my thinking since new concepts (at least for me) were introduced.
20. Yes but really hard
21. It did a lot. It was very difficult.
22. CSS430 isn't an easy class, so for sure it stretched my thinking. There were only a couple of concepts that carried over from CSS422, but I thought more would.
23. The projects in the course were intellectually stimulating because they were in-depth and had me thinking.
24. This is a very hard class. Need a lot of time to study
25. Yes, it was interesting to think about how operating systems actually function behind the scenes
26. This class was intellectually stimulating and gave explanations to the concepts that were unclear to me.
27. Yes
28. Yes
29. N/A
30. Yes, the concepts and applications made sense but there were specific interactions between different concepts we learned which stretched my thinking.
31. I believe this class was stimulating at teaching the basics of an operating system. It is hard to dive deep into OS theory in 10 weeks, but this class did well at scraping the surface.
32. Yes, it was challenging and interesting.
33. Various content within the course was helpful and did intellectually stimulate me.
34. This class was very stimulating. Learning C was kind of difficult but I got the hang of it.
35. Yes, there were a lot of concepts that we had to grasp.

What aspects of this class contributed most to your learning?

1. I believe that the programming assignments required us to read books and look up information online for self-learning rather than reading slides. Thus, we can learn more knowledge ourselves.
2. The projects were very engaging.
3. The projects contributed the most to my learning.
5. Being able to ask questions and get meaningful responses helped most when learning the subject since its brand new and different than anything I'd taken before.
6. The class recordings, slides. and github links.
7. Yes, this class was very helpful with learning about operating systems. I appreciated the practices we went over during class together, and it was very helpful doing a walkthrough of the code portions. Moreover, the 10 minute breaks were really appreciated as many professors do not do that. Lastly, I appreciated how we went over the programming assignments and left time for questions. Some of the topics were a little confusing and lots of lecture slides makes it really difficult to absorb any information at a certain point, but otherwise do not have complaints.
8. Projects.
9. The lectures. Dr. Pisan did an excellent job selecting material and explaining it!
10. Practical examples for real world.
11. The aspects that contributed most to my learning were the different projects and the review before the exam, as well as the questions we did as a class in the slides.
12. The lectures were the biggest aspect, especially having them be recorded to go back to. It was an amazing tool while studying.
13. In-class coding demonstrations & lectures.
14. Theory
15. program assignment
16. Programming assignments
17. The programming assignments, and the lectures
18. The projects and lectures.
19. The professor showing coding examples in class contributed a lot to my learning, as well as the programming homework.
20. Nothing, all self learning
21. Group work.
22. The ICA activities where we did coding in pairs really helped grasp the concepts at a basic level. Doing those helped so much when I started to do the first couple of projects where I could apply the things we coded in class.
23. The in class activities we did contributed to my learning the most.
24. Yes, I learned a whole lot about operating system
25. I think the in class activities, working through problems in class, and programming assignments were most helpful
26. I felt like the projects were increasing my understanding of the concepts and contributed to my learning the most.
27. Lectures were really organized. Also recorded lectures really helped as I wasn't mentally feeling good this quarter.
28. The professor has good knowledge of the subject
29. N/A
30. Concise lectures with a good pace, broken by in class activities. Really well structured in my opinion.
31. Class exercises and examples helped explain and teach concepts.
32. The projects and homework assignments.
33. I think the Homework Assignments were the best in conveyin the concepts within this course
34. Doing the in-class exercises
35. I like the lectures and the demonstrations the professor did

What aspects of this class detracted from your learning?

1. maybe the slides do not explain enough for understanding the whole concepts
2. None.
3. Nothing detracted from my learning.
5. I can't think of anything that detracted from my learning while taking this class.
6. Nothing really.
7. Yes, this class was very helpful with learning about operating systems. I appreciated the practices we went over during class together, and it was very helpful doing a walkthrough of the code portions. Moreover, the 10 minute breaks were really appreciated as many professors do not do that. Lastly, I appreciated how we went over the programming assignments and left time for questions. Some of the topics were a little confusing and lots of lecture slides makes it really difficult to absorb any information at a certain point, but otherwise do not have complaints.
8. None.
9. The programs just take too much time. I wish I could just focus on lectures and homework assignments and not need to have massive time sink programs. They were all reasonable except for the first one, the simple shell. This project is unreasonable and should be made simpler.
10. Difficult concepts.

11. I think one aspect that was not helpful were the readings. Some of the readings are okay but other readings just confused me more. It also added to the workload of the class.
12. At times when the lecture was a lot of terminology, it would go over to be and full hour to an hour and a half of just that and it would get to a point when I would do off because I could not retain any more information.
14. Nothing
15. none
16. The textbook and some lectures can have way too much information for me to process
17. Nothing
18. The homeworks.
19. None
20. The repetitive lectures and little explaining
21. Sitting and listening to lectures with no previous basic explanation on the topic.
22. Some of the homework questions were ambiguous and it was hard to figure out how to answer them correctly.
23. I believe some of the lectures got a little to complicated causing me to not pay attention or learn.
24. There are too many new concepts but the lectures are kinda fast
25. Long lectures (which can't really be avoided) with sort of complex concepts were kind of difficult to get through.
26. None
28. N/A
29. N/A
30. Hard to tell what parts were the most important to fully understand. Could be a personal issue.
31. Lack of time to explain concepts more.
32. Getting distracted in class.
33. The programming assignments were very rigid and did not have much leniency.
34. N/A
35. nothing

What suggestions do you have for improving the class?

1. more details on the slides, explain the programming assignments before they are due
2. N/A
3. It would have liked a little more time to work on the file system project, as this would have given me time to work on the optional extensions.
4. Spending more time implementing the ideas into code. While the content is mostly conceptual, spending a bit more time implementing it and explaining the thought process behind how to implement it would be beneficial for students to understand it in a more applicable setting
5. Post more practice questions for for midterm and final.
6. More samples with stronger relevancy for exams.
7. Yes, this class was very helpful with learning about operating systems. I appreciated the practices we went over during class together, and it was very helpful doing a walkthrough of the code portions. Moreover, the 10 minute breaks were really appreciated as many professors do not do that. Lastly, I appreciated how we went over the programming assignments and left time for questions. Some of the topics were a little confusing and lots of lecture slides makes it really difficult to absorb any information at a certain point, but otherwise do not have complaints.
8. None.
9. Get rid of project one. Make the course more conceptual - for students like me genuinely interested in the subject matter, the programs are just a waste. I want to know and understand as much of the OS as possible, I think this course should be more lecture heavy and less project heavy. I truly dont think the projects did much for me. I enjoyed some of them but yeah
10. More practice in class instead of theory.
11. I really enjoyed this class I think everything is doable the only suggestion I have is if there could be a practice exam for the final exam. Other than that I think the timing of all the homework and projects was great, You don't have everything to do all at one time.
12. Switching around parts of the lecture to make it more interactive so that the students can be more interested and active.
13. Spacing out time between the projects/exams so that they're more even
14. Nothing
15. none
16. N/A
17. I think the class is fine as is
18. Increase overview on projects and provide more interaction with students regarding the setup and implementation of project code.
19. Maybe more coding examples in class would work for some students to better grasps the concepts instead of just going over powerpoint presentations.
20. A lot
21. Making the class more proactive so that student can learn hands on.

22. More coding ICAs later in the quarter.
23. I suggest drawing a lot more on the board in order to understand these concepts that are covered in this course as it helps students learn rather than looking at pre drawn images on the screen.
24. It would be nice to have more practice over the practical problem
25. none
26. Everything was good!
28. N/A
29. N/A
30. None!
31. I didn't particularly enjoy the textbook, but I am not sure of any other OS textbook offerings so that could just be the nature of the situation. The lectures merely were summaries of the textbook reading, and maybe an alternate point of view would have helped explain concepts better.
32. Worksheets for in-class assignments to practice concepts.
33. More leniency on the programming assignments
34. N/A
35. a little more hints on projects

Your instructor is a member of a cohort of faculty who are piloting some new course evaluation questions focused around common elements of effective teaching. What did you like or not like, if anything, about the set of questions on this evaluation compared to other course evaluations you have completed?

1. professor is super nice and helpful in explaining questions.
2. These questions in the course evaluation is very bland, questions are not specific and I dont feel like i am giving good feedback.
3. Most of the new questions felt very repetitive, and there were some that I felt weren't applicable to the course.
5. I liked how specific the questions for agree and disagree were as they forced me to think more about the class as a whole throughout the quarter.
6. It was pretty standard, I don't think I have anything else to add.
7. I think it would be a better setup to have less questions on each page to click through. Having one giant page makes it difficult to read, but otherwise have no complaints.
8. None
9. This is good evaluation
10. N/A
11. N/A
12. It is entirely the same as with my other course evaluations. However, I would say that the writing question of what aspects detracted from your learning and what suggestions you have to improve the class are similar and I would assume have very close answers.
14. It's good
15. wish they grade faster
16. Good that it doesn't feel too different from usual course evaluations
17. It was all good
18. They were similar and my feelings towards evaluations are impartial.
19. Seemed like a lot of questions but I would say the more the better.
20. Nothing
21. The questions were fine and helped me elaborate briefly on what was needed.
22. There were more questions regarding how I felt rather than how the teacher performed which is a nice difference and easier to answer.
23. N/A
24. I really like the way he taught this class.
25. not sure
26. I liked that the questions were concentrated on the actual outcome of this class.
28. N/A
29. N/A
30. No comment
32. I liked the questions about what helped and hindered learning, I think focusing a bit more on participation in class to help learn concepts would be good.
33. The questions were standard.
35. good feedback questions

IASystem Course Summary Reports summarize student ratings of a particular course or combination of courses. They provide a rich perspective on student views by reporting responses in three ways: as frequency distributions, average ratings, and either comparative or adjusted ratings. Remember in interpreting results that it is important to keep in mind the number of students who evaluated the course relative to the total course enrollment as shown on the upper right-hand corner of the report.

Frequency distributions. The percentage of students who selected each response choice is displayed for each item. Percentages are based on the number of students who answered the respective item rather than the number of students who evaluated the course because individual item response is optional.

Median ratings. IASystem reports average ratings in the form of item medians. Although means are a more familiar type of average than medians, they are less accurate in summarizing student ratings. This is because ratings distributions tend to be strongly skewed. That is, most of the ratings are at the high end of the scale and trail off to the low end.

The median indicates the point on the rating scale at which half of the students selected higher ratings, and half selected lower. Medians are computed to one decimal place by interpolation.¹ In general, higher medians reflect more favorable ratings. To interpret median ratings, compare the value of each median to the respective response scale: *Very Poor, Poor, Fair, Good, Very Good, Excellent (0-5)*; *Never/None/Much Lower, About Half/Average, Always/Great/Much Higher (1-7)*; *Slight, Moderate, Considerable, Extensive (1-4)*.

Comparative ratings. IASystem provides a normative comparison for each item by reporting the decile rank of the item median. Decile ranks compare the median rating of a particular item to ratings of the same item over the previous two academic years in all classes at the institution and within the college, school, or division. Decile ranks are shown only for items with sufficient normative data.

Decile ranks range from 0 (lowest) to 9 (highest). For all items, higher medians yield higher decile ranks. The 0 decile rank indicates an item median in the lowest 10% of all scores. A decile rank of 1 indicates a median above the bottom 10% and below the top 80%. A decile rank of 9 indicates a median in the top 10% of all scores. Because average ratings tend to be high, a rating of "good" or "average" may have a low decile rank.

Adjusted ratings. Research has shown that student ratings may be somewhat influenced by factors such as class size, expected grade, and reason for enrollment. To correct for this, IASystem reports **adjusted medians** for summative items (items #1-4 and their combined global rating) based on regression analyses of ratings over the previous two academic years in all classes at the respective institution. If large classes at the institution tend to be rated lower than small classes, for example, the adjusted medians for large classes will be slightly higher than their unadjusted medians.

When adjusted ratings are displayed for summative items, **relative rank** is displayed for the more specific (formative) items. Rankings serve as a guide in directing instructional improvement efforts. The top ranked items (1, 2, 3, etc.) represent areas that are going well from a student perspective; whereas the bottom ranked items (18, 17, 16, etc.) represent areas in which the instructor may want to make changes. Relative ranks are computed by first standardizing each item (subtracting the overall institutional average from the item rating for the particular course, then dividing by the standard deviation of the ratings across all courses) and then ranking those standardized scores.

Challenge and Engagement Index (CEI). Several IASystem items ask students how academically challenging they found the course to be. IASystem calculates the average of these items and reports them as a single index. *The Challenge and Engagement Index (CEI)* correlates only modestly with the global rating (median of items 1-4).

Optional Items. Student responses to instructor-supplied items are summarized at the end of the evaluation report. Median responses should be interpreted in light of the specific item text and response scale used (response values 1-6 on paper evaluation forms).

¹ For the specific method, see, for example, Guilford, J.P. (1965). *Fundamental statistics in psychology and education*. New York: McGraw-Hill Book Company, pp. 49-53.