IASystem
The Course Evaluation Standard

COURSE SUMMARY REPORT
Numeric Responses

University of Washington, Bothell
Sci, Tech, Engr. & Math
Science, Tech, Engr. & Math
Term: Spring 2020

CSS 430 A
Operating Systems
Course type: Online

Evaluation Delivery: Online
Evaluation Form: Y
Responses: 14/40 (35% moderate)

Taught by: Yusuf Pisan
Instructor Evaluated: Yusuf Pisan-Lecturer

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	College Decile
4.2	**5**
(0=lowest; 5=highest)	(0=lowest; 9=highest)

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: 5.8
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK Inst	College
The remote learning course as a whole was:	14	21%	43%	14%	14%	7%		3.8	3	3
The course content was:	14	43%	36%	7%	14%			4.3	5	6
The instructor's contribution to the course was:	14	57%	21%	7%	7%	7%		4.6	5	6
The instructor's effectiveness in teaching the subject matter was:	14	50%	14%	14%	7%	7%	7%	4.5	5	6

STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median	DECILE RANK Inst	College
Do you expect your grade in this course to be:	14	21%	7%	14%	36%	14%	7%		4.3	1	1
The intellectual challenge presented was:	14	43%	43%	7%	7%				6.3	8	8
The amount of effort you put into this course was:	14	36%	36%	21%	7%				6.1	7	7
The amount of effort to succeed in this course was:	14	36%	43%	14%	7%				6.2	8	7
Relative to similar courses taught in person, your participation in this course was:	14	36%	14%		29%	7%	7%	7%	5.0		
Relative to similar courses taught in person, your success in this course was:	14	36%	7%	21%	14%	7%	14%		5.2		

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: 12.8 Hours per credit: 2.6 (N=14)

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
		7%	7%	14%	7%	21%	14%	14%		14%	

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

Class median: 10.5 Hours per credit: 2.1 (N=14)

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
	14%	7%	21%	7%		7%	29%	14%			

What grade do you expect in this course?

Class median: 3.5 (N=14)

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
21%	29%	21%	14%	7%	7%									

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

(N=14)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
64%	21%			14%	

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STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK Inst	DECILE RANK College
The effectiveness of this remote course in facilitating my learning was:	14	29%	29%	14%	14%	14%		3.8		
Timeliness of instructor response to assignments was:	14	71%	29%					4.8		
Quality/helpfulness of instructor feedback was:	14	43%	21%	36%				4.2		
Clarity of course objectives was:	14	57%	29%	14%				4.6	6	
Clarity of student responsibilities and requirements was:	14	57%	36%		7%			4.6	6	7
Usefulness of reading assignments in understanding course content was:	14	36%	43%	14%		7%		4.2		
Usefulness of written assignments in understanding course content was:	14	43%	21%	7%	21%	7%		4.2		
Usefulness of online resources in understanding course content was:	14	43%	50%			7%		4.4		
Evaluative and grading techniques (tests, papers, projects, etc.) were:	14	43%	43%	14%				4.3	5	6
Reasonableness of assigned work was:	13	23%	54%	15%	8%			4.0	3	4
Organization of materials online was:	14	36%	29%	29%	7%			4.0		

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STANDARD OPEN-ENDED QUESTIONS

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

1. Yes. This course was very challenging.

3. This class was intellectually stimulating. It did stretch my thinking. I had very limited knowledge of C programming language before this class. I had to spend a lot of time solving simple problems that shouldn't happen if I have stronger knowledge in C.

5. Yes, because the course material is fundamental for understanding computer science and software engineering. Many of the topics were brand new for me and gave me a depth of understanding for an operating system I previously lacked.

6. Quack, quack quack quack quack quack. Quack quack quack, quack quack quack quack quack quack and quack quack quack.

7. Absolutely. I knew very little about how operating systems work prior to taking this course. Learning the material required a lot of abstract thinking to understand how different hardware and software components interact at a level that isn't visible to the user.

9. Yes it did, I was not well versed in C language but after being thrown into it I learned a lot

What aspects of this class contributed most to your learning?

1. Professor Pisan did an excellent job of doing his best to keep the class engaged. Being a difficult class at 8:45, this is difficult but he faced this challenge very well. Other things I found very helpful was the study guides and also going over the assignments before we worked on them. I would often be confused, so going over the assignments was very helpful. I also really wanted to highlight the class discord. Please keep doing this in every other class. It was incredibly helpful for any questions I had.

3. Most of the materials are good and comprehensive.

4. Prof Pisan goes above and beyond to interact with students. I'm sure it's a pretty significant commitment to make himself as accessible & available as he does — I think it's been very beneficial to us. He has also done a particularly good job of knowing and making productive use of the Zoom features. And I appreciate that he shows up to each lecture with enthusiasm despite the guarantee that 50% of us will be braindead at 8:45am and unlikely to reciprocate that attitude.

5. The assignments contributed the most to my learning. Also, I would just like to say that Professor Pisan is an above and beyond teacher. He made an active effort to make the lectures as interactive as possible. Even if his attempts weren't always effective. Professor Pisan's commitment to me as a student in making his lectures as good as possible did not go unappreciated by me. Thank you for that Professor Pisan.

6. 1) Quack quack 2) Quack quack quack, quack quack 3) Quack- quack quack quack.

7. Class lectures were very informative and projects were well designed. In class coding examples were also extremely helpful. The course Discord channel was also really useful.

9. The feedback and responsiveness on discord from the professor

What aspects of this class detracted from your learning?

1. Sometimes homework assignments felt like they got in the way of working on the programming assignment, but really wasn't a huge issue

3. The professor usually reads everything straight from the slides.

5. Having the lectures online seriously detracted from my learning. This is mostly because I am a bad student and struggle to pay attention even when in class. The difference is, that when I am in class I always sit near the front so that I am hearing even if I am somewhat checked out, but when it is online the distractions around me are far too enticing, and I find myself absent, except for my camera being on me. Also, that there was an option to skip the final. Perhaps I should not say this, but I always learn an enormous amount during finals week out of necessity. So having the option to skip the final, although it is appreciated by me, I do not think was the right move.

6. Quackity.

7. The written homework questions were often difficult to understand. In-class group work was not always productive, although this was greatly improved during the second half of the quarter.

9. Remote learning because of many distractions

What suggestions do you have for improving this class generally?

1. For the most part, continue to do what you did. I thought this was probably the best taught class I've had so far at UW Bothell. I personally don't find operating systems all that interesting or engaging, so I was surprised that I found myself enjoying the content sometimes.

2. try to find a way to write things on the "virtual board" when discussing calculation of offsets, pages and frames, hit or miss, etc

3. The group works are vague but they are helpful so I think having more specific instructions for the group works will help a lot. More examples of the materials in the lectures.

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4. I think our textbook is pretty good for practical use and it's very readable. However, the popular opinion online at the moment is that the Comet Book[0] is the best OS textbook right now AND it's available as PDF for free (see the link or google 'OSTEP'). Take a look at it if you're interested. They are a fair amount different but I think OSTEP might better provide a high level mental model of the operating system. [0]: http://pages.cs.wisc.edu/~remzi/OSTEP/

5. Return to normal campus life. The corona virus is far to overblown at this point.

6. Quack quack quack quack, quack quack quack quack or quack quack. Quack quack; quack quack and quack quack.

7. Include a schedule in the syllabus with lecture topics and their associated sections in the textbook. Ideally, there would be a required reading and associated canvas quiz (replacing the written HW questions) prior to the material being covered in class. I think this would help students keep up with the pace of the lectures.

8. For P5 make the tests tighter so the students see what problems may occur.

9. n/a

If this course were offered remotely again, what suggestions do you have to improve the student experience?

1. I would review the programming assignments a couple lectures earlier than we did in this class. Usually we would review/introduce the assignment the week it was due, when we were given two weeks to work on it. It's a very small thing and maybe it was just different from what is normally done, but despite that I found everything else to be super helpful.

2. try to find a way to write things on the "virtual board" when discussing calculation of offsets, pages and frames, hit or miss, etc

5. I would recommend more programming assignments, because I really like those. That is the part where I can really shine, and where I learn the most. Figuring out how to make the project, and what must be done is actually very fun for me, and I spend many hours working on those projects. However, I felt some of the projects were too easy, so that instead of taking 8+ hours they only took me an afternoon.

6. QUACK

7. None. Professor Pisan did an excellent job of using the available technologies to facilitate remote learning.

9. I'm unsure

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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.

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