University of Washington, Bothell Engineering and Mathematics Term: Winter 2015

B EE 233 BB **Circuit Theory** Course type: Face-to-Face

Taught by: Nicole Hamilton Instructor Evaluated: Nicole Hamilton-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:

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:

SUMMATIVE ITEN	19

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	DECILE RANK Inst College
The lab section as a whole was:	22	32%	50%	18%				4.1	4
The content of the lab section was:	22	23%	55%	23%				4.0	3
The lab instructor's contribution to the course was:	22	59%	23%	18%				4.7	5
The lab instructor's effectiveness in teaching the subject matter was:	22	45%	36%	18%				4.4	4

STUDENT ENGAGEMENT

Polotivo	to other o			hovo tok			l F	Much ligher			Average		(0)	Much Lower		DECI	LE RANK
nelative		ollege co	Juises you	I Have lake	511.		N	(7)	(6)	(5)	(4)	(3)	(2)	(1)	Median	Inst	College
Do you e	xpect your	grade in	this course	to be:			22	23%	32%	27%	14%	5%			5.6	6	
The intelle	ectual chall	lenge pre	sented was	:			22	9%	50%	36%	5%				5.7	4	
The amou	unt of effort	effort you put into this course was: 22 18% 55% 18% 9%								5.9	6						
The amou	The amount of effort to succeed in this course was:					22	18%	55%	18%	9%				5.9	6		
Your invo etc.) was	lvement in :	course (doing assig	nments, at	tending cla	asses,	22	32%	32%	14%	23%				5.9	5	
On avera including a papers ar	ge, how ma attending c nd any othe	any hour lasses, c er course	s per week loing readin related wo	have you gs, review rk?	spent on th ing notes,	nis course, writing								Class	s median	: 7.2	(N=22)
Under 2	2-3		4-5	6-7	8-9	10-11		12-13		14-15	16	6-17	18-1	19	20-21	22	or more
	9%		18%	27%	18%	14%		5%		5%							5%
From the total average hours above, how many do you consider were Class med valuable in advancing your education?									s median	: 6.4	(N=22)						
Under 2	2-3		4-5	6-7	8-9	10-11		12-13		14-15	16	6-17	18-1	9	20-21	22	or more
	23%	>	14%	32%	18%	9%											5%
What grad	Vhat grade do you expect in this course? Class m								s median	: 3.5	(N=21)						
A (3.9-4.0) 10%	A- (3.5-3.8) 48%	B+ (3.2-3.4) 19%	B (2.9-3.1)	в- (2.5-2.8) 5%	C+ (2.2-2.4) 14%	C (1.9-2.1) 5%	C- (1.5-1.8	8) (1.	D+ 2-1.4)	D (0.9-1.1	D) (0.7-	- -0.8)	E (0.0)	Pass	s Cre	dit	No Credit
In regard to your academic program, is this course best described as:												(N=22)					
In yo	A core/distribution In your major requirement An elective In your mino 91%					inor	Ар	rogram	n requirer 9%	nent		Other					



Median 4.2

(0=lowest; 5=highest)

CEI: 5.6 (1=lowest; 7=highest)

Evaluation Delivery: Online Evaluation Form: H Responses: 22/23 (96% very high)

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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 College
Explanations by the lab instructor were:	21	38%	52%	10%				4.3	4
Lab instructor's preparedness for lab sessions was:	22	41%	36%	23%				4.2	3
Quality of questions or problems raised by the lab instructor was:	22	32%	55%	14%				4.2	4
Lab instructor's enthusiasm was:	22	59%	27%	14%				4.7	4
Student confidence in lab instructor's knowledge was:	22	59%	27%	14%				4.7	5
Lab instructor's ability to solve unexpected problems was:	22	41%	45%	9%	5%			4.3	4
Answers to student questions were:	22	50%	32%	18%				4.5	5
Interest level of lab sessions was:	22	45%	36%	18%				4.4	5
Communication and enforcement of safety procedures were:	22	55%	32%	14%				4.6	5
Lab instructor's ability to deal with student difficulties was:	22	41%	50%	5%	5%			4.3	5
Availability of extra help when needed was:	22	41%	32%	27%				4.2	3
Use of lab section time was:	22	50%	32%	18%				4.5	6
Lab instructor's interest in whether students learned was:	21	38%	57%	5%				4.3	3
Amount you learned in the lab sections was:	22	36%	50%	14%				4.2	4
Relevance and usefulness of lab section content were:	22	41%	45%	14%				4.3	5
Coordination between lectures and lab activities was:	22	36%	41%	14%	9%			4.2	5
Reasonableness of assigned work for lab section was:	22	32%	41%	14%	14%			4.1	4
Clarity of student responsibilities and requirements was:	22	41%	41%	9%	9%			4.3	5

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STANDARD OPEN-ENDED QUESTIONS

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

1. Mostly just time consuming.

2. yes. I had no prior experience with lab equipment, and i feel that i have gained a solid grasp of the equipment necessary to complete each lab assignment.

- 3. Yes. It really helped to solidify my understanding of the theory from the class.
- 4. Hands-on experience was valuable
- 5. Yes, it practiced using a lot of the instruments I have not had any knowledge of and practiced building circuits.
- 6. Yes the circuits were challenging and fun.
- 7. Yes, it took me a while to finish one lab

8. Yes

9. n/a

- 10. I enjoyed doing the pre-labs because it helped me understand what I was looking for when I attempted the actual lab experiments.
- 11. Yes, the lab work was challenging and time consuming.

12. yes.

What aspects of this class contributed most to your learning?

- 1. Building the circuits and learning how to properly use the equipment contributed the most.
- 2. working with other students to solve problems.
- 3. Going from the theory to actually testing the system and seeing that it really worked.
- 4. Designing circuits and troubleshooting
- 5. Being hands on
- 6. Help from lab instructor.
- 7. Her explanations before each lab

9. n/a

10. Actually working with the circuits and ensuring they were doing what they were suppose to be doing.

11. Use of lab equipment and understanding its use.

12. I really like professor Nicole Hamilton. she is very knowledgeable and smart. she helped us every time we had a question without getting frustrated. she seems very nice and friendly to students and i am looking forward to have her as my instructor again in the future. hopefully!! and i wish i could take EE371 class with her next quarter ,but unfortunately have already took that class last quarter

- 13. lab can help me understand more than the book
- 14. Teacher explain every detail very clear. this is the best lab I have!

What aspects of this class detracted from your learning?

2. nothing i can think of.

- 3. Class size was large
- 4. Trying to fix simple errors

5. Sometimes the instruments would not work properly and my partner and I would waste hours trying to figure out why our data was incorrect.

- 6. amount of work required
- 7. Time is something we probably need more of. I ended up coming back for lab pretty often

9. n/a

10. I believe the amount of people in each lab section as well as the availability of help throughout the lab. There would be times where I would not understand something but I would have to wait until a week (or next lab session) to receive help.

11. Understanding the concepts of what we were doing.

12. N/A

Evaluation Delivery: Online Evaluation Form: H Responses: 22/23 (96% very high)

What suggestions do you have for improving the class?

1. For the first lab we had a clear rubric of what she expected from us, and i think that this made finishing the lab quite easier. We didnt have to guess what types of measurements she required and it gave us something to base our lab report off of.

2. no.

- 3. More clarity in the prelabs.
- 4. Point out possible errors students can make
- 6. fix up the labs
- 7. more open-lab help

9. n/a

10. Any available help from the actual instructor of the lab then lab attendants who assume what instructor is looking for in the report.

11. More lab time.

12. i think 4 labs is too much because each lab is so challenging and takes students long time to finish everything perfectly. specially the last lab had took too much of our time when we had to study for finals too. i also think pre-labs should't be part of our lab report since Professor Hamilton would help us through it anyway in class and they just take too much of our time to type

13. Everything is perfect



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.