

B EE 271 AA
Digital Circuits And Systems
Course type: Face-to-Face

Evaluation Delivery: Online
Evaluation Form: H
Responses: 12/24 (50% high)

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:

Median 4.6 (0=lowest; 5=highest)	College Decile 8 (0=lowest; 9=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: 6.0 (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 lab section as a whole was:	12	50%	33%	8%	8%			4.5	6	8
The content of the lab section was:	12	50%	33%	17%				4.5	7	8
The lab instructor's contribution to the course was:	12	67%	33%					4.8	7	8
The lab instructor's effectiveness in teaching the subject matter was:	12	67%	25%		8%			4.8	7	8

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:	12	25%	25%	17%	33%				5.5	5	7
The intellectual challenge presented was:	12	33%	67%						6.2	8	8
The amount of effort you put into this course was:	12	50%	33%	8%	8%				6.5	9	8
The amount of effort to succeed in this course was:	12	58%	17%	17%	8%				6.6	9	9
Your involvement in course (doing assignments, attending classes, etc.) was:	12	50%	25%	8%	17%				6.5	8	8

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: 7.0 (N=12)

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
		25%	33%	25%	17%						

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

Class median: 5.5 (N=12)

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
8%	8%	33%	25%	17%	8%						

What grade do you expect in this course?

Class median: 3.6 (N=12)

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
33%	25%	17%	17%	8%										

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

(N=12)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
92%	8%				

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:	12	42%	42%	17%				4.3	5	6
Lab instructor's preparedness for lab sessions was:	12	67%	25%	8%				4.8	7	
Quality of questions or problems raised by the lab instructor was:	12	58%	33%	8%				4.6	7	8
Lab instructor's enthusiasm was:	12	67%	25%	8%				4.8	6	6
Student confidence in lab instructor's knowledge was:	12	75%	17%		8%			4.8	7	8
Lab instructor's ability to solve unexpected problems was:	12	67%	25%	8%				4.8	7	
Answers to student questions were:	12	42%	42%	17%				4.3	4	6
Interest level of lab sessions was:	12	58%	25%	17%				4.6	7	
Communication and enforcement of safety procedures were:	12	58%	33%	8%				4.6	6	
Lab instructor's ability to deal with student difficulties was:	12	67%	25%	8%				4.8	8	9
Availability of extra help when needed was:	12	67%	33%					4.8	7	8
Use of lab section time was:	12	42%	33%	25%				4.2	5	7
Lab instructor's interest in whether students learned was:	11	73%	27%					4.8	7	8
Amount you learned in the lab sections was:	12	58%	25%	17%				4.6	7	8
Relevance and usefulness of lab section content were:	12	75%	17%	8%				4.8	8	9
Coordination between lectures and lab activities was:	12	75%	17%	8%				4.8	9	
Reasonableness of assigned work for lab section was:	12	42%	25%	17%	17%			4.2	4	6
Clarity of student responsibilities and requirements was:	12	58%	25%	8%	8%			4.6	7	8

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STANDARD OPEN-ENDED QUESTIONS

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

1. Labs were very challenging.
2. Yes, it helps us understand the material better.
3. "intellectually stimulating" I'm not sure I'd use that description for any engineering class. The systems and what you learn about are so specific, I don't really feel like I've become a smarter person, but rather just now know more. Like, if I know a movie is playing down the street doesn't mean I'm smart, it just means I know. Upper level physics classes I would say are stimulating, because you learn about why the world is the way it is, and give you insight to all aspects of what's around you.
4. NA
6. Writing your own verilog code is tough, especially for first-timers. The exercises were a great problem to solve but they were very tough, and pretty integrated.
7. The labs required of us were less streamlined than I'm used to and naturally presented more of a challenge. They were stressful but I can't deny that I did (surprisingly) find a lot of the labs to be somewhat enjoyable.
8. It did stretch my thinking, Learning a new language close to C# but not quite forced me to think outside my C# box.
9. Yes, Verilog is tricky to figure out.
10. It is intellectually stimulating but I think the lectures and the labs need to be correlated to improve students' understanding and enthusiasm for this course.

What aspects of this class contributed most to your learning?

1. Having to figure things out independently outside of lab time.
3. Instructor being available.
4. NA
5. Nicole Hamilton, she was willing to come into open lab on the week ends and days that were not necessary all to help students. She was never willing to put her own comforts ahead of the class, and is a true example of a teacher who really cares about the success of her students.
6. Lab time
7. Nicole was very helpful and always willing to answer questions anyone had. She came in a couple of times to make up lab time missed and even provided extra lab sessions.
8. The addition of learning some Verilog in class helped. The wires and breadboard given the first day of class.
9. instructor explanations of the problem in your Verilog code.
10. I don't know. I think if the lectures were sync with the labs, my understanding of the material would have been better than it is now. I have good grades on the exams and home works, but I don't feel confident that I can explain the material really well to another student.

What aspects of this class detracted from your learning?

1. Snow day cancellations
3. It was hard to get help from the instructor some times because everyone needs help.
4. NA
5. None
6. All of the details and actually figuring out how to do the problems, which were very tough. Nicole was very helpful though when we asked.
7. Being the Monday section, we were EXTREMELY pressed for time as we had 2 holidays (and a snow day, but that was not really predictable). Right now, at the end of the quarter, my partner and I are rushing to finish a couple labs out of the 4 required. This was due primarily to time constraints, with two factors playing a key role: holidays and compile times. We did not miss any lab sections and even came in several times outside of section to try and work on our labs for hours at a time.
8. The oscilloscope that was "broken" on the first lab session and essentially wasting that day trying to debug a faulty oscilloscope.
9. compiling times.
10. The labs distracted me because we spent a lot of time than needed if the labs and lectures were sync together.

What suggestions do you have for improving the class?

2. I think professor could tell us more details in the lab instructions.

3. Having a queue for those who need help, or getting more lab instructors.
4. NA
5. Nicole as a teacher always!
6. I'm not sure, maybe get rid of the 4th lab. Some student's barely finished the 3rd by the end of the quarter.
7. If there were a way to schedule this section around holidays, that would've been best. Better hardware would have been greatly appreciated and would have majorly helped in reducing time pressure.
8. Skip Lab 1. Although it was a nice introduction to TTL components, it seemed it only served the purpose as an introduction to the function generator and the oscilloscope that went way too long.
10. I think the labs should be sync with the lectures. For example. we experimented latches in the first lab, first week, and latches were explained in class in the 8th week of the quarter.

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.