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

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

Evaluation Delivery: Online
Evaluation Form: A
Responses: 17/26 (65%)

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
4.6	**6**
(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: 5.9
(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 course as a whole was:	17	47%	53%					4.4	6	7
The course content was:	17	53%	47%					4.6	7	7
The instructor's contribution to the course was:	17	53%	47%					4.6	5	6
The instructor's effectiveness in teaching the subject matter was:	17	59%	24%	18%				4.7	6	7

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:	17	12%	35%	41%	12%				5.4	5	6
The intellectual challenge presented was:	17	29%	59%	6%	6%				6.2	8	7
The amount of effort you put into this course was:	17	41%	41%	12%	6%				6.3	8	7
The amount of effort to succeed in this course was:	17	35%	41%	18%	6%				6.1	8	6
Your involvement in course (doing assignments, attending classes, etc.) was:	17	59%	41%						6.7	9	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: 12.2 Hours per credit: 2.5 (N=17)

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
		6%	12%	6%	18%	24%	6%	18%			12%

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

Class median: 10.8 Hours per credit: 2.1 (N=17)

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
	6%	6%	6%	18%	24%	24%		12%			6%

What grade do you expect in this course?

Class median: 3.6 (N=17)

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
18%	53%	18%	6%	6%										

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

(N=17)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
82%	6%			12%	

Survey no: 14611

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
Course organization was:	17	41%	53%	6%				4.3	6	6
Clarity of instructor's voice was:	17	53%	41%	6%				4.6	4	5
Explanations by instructor were:	17	41%	41%	18%				4.3	5	5
Instructor's ability to present alternative explanations when needed was:	17	53%	35%	12%				4.6	6	6
Instructor's use of examples and illustrations was:	17	41%	47%	12%				4.3	4	5
Quality of questions or problems raised by the instructor was:	17	59%	35%	6%				4.7	7	7
Student confidence in instructor's knowledge was:	17	76%	24%					4.8	8	8
Instructor's enthusiasm was:	17	82%	18%					4.9	8	8
Encouragement given students to express themselves was:	15	60%	33%	7%				4.7	5	6
Answers to student questions were:	17	71%	29%					4.8	8	8
Availability of extra help when needed was:	17	47%	47%	6%				4.4	5	5
Use of class time was:	17	65%	29%	6%				4.7	8	7
Instructor's interest in whether students learned was:	17	65%	35%					4.7	7	7
Amount you learned in the course was:	17	59%	35%	6%				4.7	7	7
Relevance and usefulness of course content were:	16	62%	38%					4.7	7	7
Evaluative and grading techniques (tests, papers, projects, etc.) were:	17	53%	41%	6%				4.6	6	7
Reasonableness of assigned work was:	17	59%	29%	12%				4.7	7	7
Clarity of student responsibilities and requirements was:	17	53%	47%					4.6	6	6

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

Evaluation Delivery: Online
Evaluation Form: A
Responses: 17/26 (65%)

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

STANDARD OPEN-ENDED QUESTIONS

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

1. It was great!

2. This class provided applicable knowledge to my future.

3. yeah very hard but cool new things that i've learned

4. This is my first ever class at UW Bothell as a transfer student. I thought this quarter would be really difficult. However my instructor, Ms. Nicole is amazing, she knows her stuff well. Even though this class is pretty complicated, I learned a lot of new things as we went through the course because Ms. Nicole teaching is more based on her experience as an engineer.

5. The lab was supper hard, which is the reason why this class is so stimulating.

6. Yes because it was a brand new class of materials that is completely different from analog.

7. Very much so, I like when we have to do examples, the concepts are very abstract

8. This is my first time doing Verilog. It did stretch my thinking inside and outside of class.

9. This class was intellectually stimulating and it stretched my thinking because writing verilog code required creativity, ingenuity and abstract reasoning.

10. This class was really fun and helpful. Every time in lecture she explains content very clear. This class really stimulated me intellectually because it was really new thing.

11. Yes, the problems presented in class required a lot of thinking.

12. the class was intellectually stimulating. Broadened my horizon

13. This class was intellectually stimulating. It expanded what I already know and challenged my thinking. Because of the way the course was taught, I think I understand better how to design and implement circuit systems.

14. Yes to stimulating, yes to stretching. For both concepts it was a good challenge that made me think in a completely new way

15. The class itself was intellectually stimulating as the way the material was presented to the class caused us to critically think about what we were learning.

What aspects of this class contributed most to your learning?

1. Simply put, Nicole is the best teacher in the EE department. She might be a little strange and sometime a bit off putting but her teaching ability is second to none. Her teaching style, though dry, gives the knowledge needed to not just be a competent engineer but one who can excel at their job, often showing the class how we could strategize making our designs more efficient, cheaper, and faster. I can not overstate how much differently this class would have gone for me if Nicole was not teaching it.

2. The labs and Verilog coding were the most helpful to my learning. I was relieved to see that they were incorporated in lectures and were often actively encouraged for students to attempt writing modules during class before the actual solution was provided. The document camera that was introduced was also a huge help to my understanding.

3. nicole hamilton is super dope and smart and teaches well

4. When Ms. Nicole doex example and explanations on the white board and it makes a lot sense to me, than explaining using slides. She always make sure that we understand the concept. And always make sure that everyone in the class understand a concept before moving to the next one. She would gladly go through a specific concept if you didn't understand something.

5. Doing lab help me to understand the concept better, which is why I'm doing great in the class.

6. The coding in labs

7. The labs

8. I learned a lot about coding and logic gates.

9. The lab, lectures, and homeworks contributed most to my learning.

10. Nicole was really helpful all the time. Whenever she can help students, she was happy to answer to all questions. Nicole always went over to the slide to explain the whole class to make all understand the content. It was really helpful.

11. In class problems given.

12. Labs more so than lectures.

13. The laboratory exercises and the way the course was lectured attributed the most to me learning this past quarter.

14. Everything? Does everything count? everything here is useful and relevant to my degree

15. The aspects of this class that contributed most to my learn was the lecture slides as well as the on-board examples. I liked how we reviewed the material from last lecture as a way of testing whether or not we truly understand the material. Working out problems on the board help with understanding the process as well as understanding what the problem is asking.

What aspects of this class detracted from your learning?

1. Nothing!

2. The slides are incredibly repetitive but I understand there's not really a better way to cover this content. I often felt as though my time was not used the most effectively. It seemed the first half of classes were always the second half of the previous class. --- A solution to this could be to allot a specific amount of time for review, then move on. Covering only the most confusing. Or just a 20-30 minute questions period (from homework, slides, lab, etc.)

3. just how new the topic is; i've never thought about how transistors rule the world

4. Seeing so much slides for 2 and half hours class time.

5. Nothing

6. Not having enough examples

8. Coding is hard to learn. There wasn't much that detracted me from learning other than not being able to understand some of the material. I had to do a lot of reading to understand better.

9. The long lectures detracted from my learning.

10. The fact that it was an evening class, it was bit hard to stay late ,but it worth the time. Nicole is great instructor ,very clear and very knowlegeable.

11. none

12. Not enough time to do more labs

13. This does not apply to this class.

14. Teacher is kind of a spaz, but in a good way.

15. Most of the lecture slides were neatly presented although there were lectures were not as neatly organized, which somewhat detracted from the learning experience as you would go back and forth between slides.

What suggestions do you have for improving the class?

1. Tell better jokes

2. Definitely more of that document camera. It was only introduced part of the way through the quarter but it contributed so much that it was highly valued. Also more opportunities to practice _diagrams_ or Verilog in class with the slides (attempt to draw/write this and after a minute or so show the solution). These were really helpful but practicing the actual gates didn't seem to happen in class and were required on exam day.

3. nada

4. Do more examples together as a class. The more example the more students will be engage in the class agenda.

5. Less homework for this class. The class is very time consuming. I take like 3 days to finish a simple lab, sometimes weeks. The homework could have been shorter to lower the student tress.

6. Have more examples where you do in class and go over why there is specific things and why its there.

7. more "now you try" i think those helped engrave the concepts

8. Show Verilog coding before conducting the labs.

9. Shorten lecture time.

10. This class was very fun and helpful. Nicole did a great job of being great instructor ,and if I have to take anymore EE required classes, I am willing to take Nicole's class.

11. I would like professor to give more practice questions in class during lectures so that I get an idea of what kind questions she might ask in an exam. Also it would be great if she could highlight the main points in her slides so that it will help students when reviewing the slides again.

12. Not much, keep up the great work. Please bring the same level of enthusiasm and teach BEE425. Lectures and Labs!

13. This does not apply to this class.

14. Better lectures

15. -Doing more example problems on the board -Having the lecture slides in order -Marking which slide we ended class with, that way you remember how far we got on the previous lecture. This would also speed the review part somewhat as you could avoid going too far back.

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

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

Evaluation Delivery: Online
Evaluation Form: H
Responses: 5/13 (38%)

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
4.8	**8**
(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: 6.3
(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 lab section as a whole was:	5	80%	20%					4.9	9	9
The content of the lab section was:	5	80%		20%				4.9	9	9
The lab instructor's contribution to the course was:	5	80%	20%					4.9	8	8
The lab instructor's effectiveness in teaching the subject matter was:	5	60%	20%	20%				4.7	6	7

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:	5	20%	40%	20%	20%				5.8	7	8
The intellectual challenge presented was:	5	40%	40%	20%					6.2	8	7
The amount of effort you put into this course was:	5	80%	20%						6.9	9	9
The amount of effort to succeed in this course was:	5	60%	40%						6.7	9	8
Your involvement in course (doing assignments, attending classes, etc.) was:	5	60%	40%						6.7	9	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: 11.0 (N=5)

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
				20%	40%	20%		20%			

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

Class median: 11.0 (N=5)

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
				20%	40%	40%					

What grade do you expect in this course?

Class median: 3.6 (N=5)

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
20%	60%	20%												

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

(N=5)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
60%	20%			20%	

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
Explanations by the lab instructor were:	5	60%	40%					4.7	7	7
Lab instructor's preparedness for lab sessions was:	5	60%		40%				4.7	6	9
Quality of questions or problems raised by the lab instructor was:	5	80%	20%					4.9	9	9
Lab instructor's enthusiasm was:	5	60%	20%	20%				4.7	4	5
Student confidence in lab instructor's knowledge was:	5	80%	20%					4.9	8	8
Lab instructor's ability to solve unexpected problems was:	5	80%		20%				4.9	9	9
Answers to student questions were:	5	80%	20%					4.9	9	8
Interest level of lab sessions was:	5	80%		20%				4.9	9	9
Communication and enforcement of safety procedures were:	5	60%	40%					4.7	7	9
Lab instructor's ability to deal with student difficulties was:	5	40%	20%	40%				4.0	4	5
Availability of extra help when needed was:	5	60%	20%	20%				4.7	7	7
Use of lab section time was:	5	60%	20%	20%				4.7	7	7
Lab instructor's interest in whether students learned was:	5	80%	20%					4.9	8	8
Amount you learned in the lab sections was:	4	100%						5.0	9	9
Relevance and usefulness of lab section content were:	5	80%	20%					4.9	9	9
Coordination between lectures and lab activities was:	5	60%	20%	20%				4.7	8	9
Reasonableness of assigned work for lab section was:	5	80%	20%					4.9	9	9
Clarity of student responsibilities and requirements was:	5	60%	20%	20%				4.7	7	7

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

Evaluation Delivery: Online
Evaluation Form: H
Responses: 5/13 (38%)

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

STANDARD OPEN-ENDED QUESTIONS

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

1. Coding is important
2. HELLA HARD ZOMG taught me so much actually
3. Yes because it is completely new materials that people did not know existed prior to this class
4. Lab was stimulating enough
5. This class was intellectually stimulating as the lab reinforced the lectures in class. It also showed the real-world implementations of the course material.

What aspects of this class contributed most to your learning?

1. Open lab times. They were nearly required.
2. dope lab subjects
3. The coding and writing of the specific codes.
4. Labs and Q&A
5. What contributed most to my learning was the hands on experience working with the breadboards and the fpga boards. By troubleshooting my code, I was able to fully understand each component in verilog, as well as common error codes and solutions.

What aspects of this class detracted from your learning?

1. Complexity of labs and delay on lecture material slowed down the ability to proceed towards the end of the quarter.
2. nothing i spent a long time on each lab
3. Not having enough examples
4. Not enough time.
5. Although I was able to develop a deeper understanding of Verilog throughout the quarter, it would have been nice to have a lab session dedicated to the basics of verilog. I found myself conceptually understanding the process, but not being able to translate that right away into verilog.

What suggestions do you have for improving the class?

2. nada
3. HAVE MORE EXAMPLES
4. Not much, keep up the great work! Please teach BEE425 Lectures and Labs with the same enthusiasm as BEE271
5. -Spend one lab session dedicated to understanding verilog

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

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

Evaluation Delivery: Online
Evaluation Form: H
Responses: 5/13 (38%)

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
4.4	**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: 6.6
(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 lab section as a whole was:	5	20%	60%	20%				4.0	4	5
The content of the lab section was:	5	60%	20%	20%				4.7	8	8
The lab instructor's contribution to the course was:	5	60%	40%					4.7	6	7
The lab instructor's effectiveness in teaching the subject matter was:	5	40%	40%	20%				4.2	4	5

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:	5	20%	40%	40%					5.8	7	8
The intellectual challenge presented was:	5	40%	20%	40%					6.0	7	6
The amount of effort you put into this course was:	5	80%		20%					6.9	9	9
The amount of effort to succeed in this course was:	5	80%		20%					6.9	9	9
Your involvement in course (doing assignments, attending classes, etc.) was:	5	100%							7.0	9	9

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: 14.0 (N=5)

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
		20%				20%	40%				20%

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

Class median: 8.5 (N=5)

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
		40%		20%		20%					20%

What grade do you expect in this course?

Class median: 3.6 (N=5)

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
	80%	20%												

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

(N=5)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
100%					

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
Explanations by the lab instructor were:	5	60%	20%	20%				4.7	7	7
Lab instructor's preparedness for lab sessions was:	5	80%		20%				4.9	8	9
Quality of questions or problems raised by the lab instructor was:	5	80%		20%				4.9	9	9
Lab instructor's enthusiasm was:	5	80%	20%					4.9	7	8
Student confidence in lab instructor's knowledge was:	5	100%						5.0	9	9
Lab instructor's ability to solve unexpected problems was:	5	100%						5.0	9	9
Answers to student questions were:	5	60%	40%					4.7	7	7
Interest level of lab sessions was:	5	80%	20%					4.9	9	9
Communication and enforcement of safety procedures were:	5	80%	20%					4.9	9	9
Lab instructor's ability to deal with student difficulties was:	5	60%	20%	20%				4.7	8	9
Availability of extra help when needed was:	5	60%	40%					4.7	7	7
Use of lab section time was:	5	80%	20%					4.9	9	9
Lab instructor's interest in whether students learned was:	5	60%	40%					4.7	6	6
Amount you learned in the lab sections was:	5	80%	20%					4.9	9	9
Relevance and usefulness of lab section content were:	5	60%	20%	20%				4.7	7	7
Coordination between lectures and lab activities was:	4	25%	25%	25%	25%			3.5	3	5
Reasonableness of assigned work for lab section was:	5	60%	20%	20%				4.7	7	8
Clarity of student responsibilities and requirements was:	5	60%	20%	20%				4.7	7	7

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

Evaluation Delivery: Online
Evaluation Form: H
Responses: 5/13 (38%)

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

STANDARD OPEN-ENDED QUESTIONS

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

1. It was very stimulating. Nicole does a great job of getting you out of your comfort zone and exploring new ways to tackle problems.

2. First and second lab was really fun. I learned a lot of things playing with fpga, breadboards, resistors, etc. However, as we advanced through the third lab it got harder and it was hard to get help from Ms. Nicole since shes also busy other students.

3. Yes

4. Yea this class was really interesting and fun. I felt like it did stretch my thought because Nicole was really well explaining things and help us to understand all things.

5. Yes, It was because coding required a lot of thinking to understand what was going on.

What aspects of this class contributed most to your learning?

1. Nicole has a way of throwing you into the deep end and then helping you out when you start drowning. Intense? yes, but it gives you confidence quick and gets you doing the really interesting labs much faster.

2. Ms. Nicole is really amazing one look through our lab she figures out what went wrong and explains why it happens and how we can fix it.

3. Nicole kept on asking if we have a question after each slide. She reminded us that we are paying for this class. She asked tricky question and answered all the question. If we didn't get what she was teaching us, she would explain it differently the second time so that the students can understand.

4. Nicole was really helpful. The lab itself was all about coding. The fact that she is willing to help us is very importand and that made us to understand things better.

5. Lab work

What aspects of this class detracted from your learning?

1. Some of the labs had a few errors that were corrected by the teacher in person, but those errors could get you if you tried to work on your own.

2. The third lab is really hard and i feel like we should get more examples to make the lab more sensible.

4. The content itself was very new to myself but as I spend much time on it, it was more fun and understandable!

5. None

What suggestions do you have for improving the class?

1. Lab 3 could use a bit more hand holding to help students out

4. Nicole is a great instructor and really helpful. Every time if you don't understand, she really explains things clearly.

5. I felt that the lab could have been organized a little better or probably professor could have gone over the syntax in more depth since at times I had confusion on what syntax to use when. Also, I felt that the lab instructions could be made more clear.