IASystem
The Course Evaluation Standard

COURSE SUMMARY REPORT
Numeric Responses

University of Washington, Bothell
Science, Tech, Engr. & Math
Term: Autumn 2016

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: 9/13 (69% high)

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
4.0	**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: 5.2
(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:	9	22%	56%	22%				4.0	4	6
The content of the lab section was:	9	22%	56%	22%				4.0	4	5
The lab instructor's contribution to the course was:	9	22%	44%	33%				3.9	2	3
The lab instructor's effectiveness in teaching the subject matter was:	9	22%	56%	22%				4.0	3	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:	9		22%	11%	56%		11%		4.2	0	1
The intellectual challenge presented was:	9	33%	22%	33%	11%				5.8	5	5
The amount of effort you put into this course was:	9	11%	44%	33%	11%				5.6	4	4
The amount of effort to succeed in this course was:	9	33%	22%	33%	11%				5.8	5	5
Your involvement in course (doing assignments, attending classes, etc.) was:	9	11%	22%	33%	33%				5.0	1	1

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=9)

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%	22%	22%	11%	11%	22%					

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

Class median: 4.9 (N=9)

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%	56%	11%	11%	11%						

What grade do you expect in this course?

Class median: 3.0 (N=9)

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
22%	11%	11%	11%	11%	11%	22%								

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

(N=9)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
56%	33%			11%	

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:	9	22%	44%	33%				3.9	3	4
Lab instructor's preparedness for lab sessions was:	9	22%	67%	11%				4.1	3	
Quality of questions or problems raised by the lab instructor was:	9	22%	56%	22%				4.0	3	5
Lab instructor's enthusiasm was:	9	33%	56%		11%			4.2	2	3
Student confidence in lab instructor's knowledge was:	9	44%	56%					4.4	3	3
Lab instructor's ability to solve unexpected problems was:	9	33%	56%	11%				4.2	4	
Answers to student questions were:	9	22%	44%	22%	11%			3.9	2	3
Interest level of lab sessions was:	9	33%	44%	22%				4.1	5	
Communication and enforcement of safety procedures were:	9	11%	67%	11%	11%			3.9	1	
Lab instructor's ability to deal with student difficulties was:	9	22%	67%		11%			4.1	4	5
Availability of extra help when needed was:	8	25%	62%		12%			4.1	3	4
Use of lab section time was:	9	22%	67%	11%				4.1	4	6
Lab instructor's interest in whether students learned was:	9	22%	44%	22%		11%		3.9	1	2
Amount you learned in the lab sections was:	9	33%	56%		11%			4.2	4	6
Relevance and usefulness of lab section content were:	9	22%	78%					4.1	3	4
Coordination between lectures and lab activities was:	9		44%	33%	11%	11%		3.3	2	
Reasonableness of assigned work for lab section was:	9	22%	44%	22%	11%			3.9	3	4
Clarity of student responsibilities and requirements was:	8	38%	38%	25%				4.2	4	6

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STANDARD OPEN-ENDED QUESTIONS

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

2. Absolutely. The material is not entirely new, but the assignments were challenging and interesting.

3. It did stretch my thinking as verilog is very interesting but challenging programming to comprehend. I found it more difficult than a regular programming class.

4. Yes, applying what we learned in class to make it work on an FPGA.

5. The content covered in this lab went beyond the material of the lecture and the designs were very challenging. Applying verilog to code our designs was a difficult task and I believe it aided our understanding of the course material.

6. It was stimulating. It gave me new knowledge into the hardware world.

What aspects of this class contributed most to your learning?

3. Going to the lab as much as I could to work on the lab project.

4. Learning Verilog hands-on with some basic techniques from industry.

5. Open ended design projects provided us with a guide to learn about verilog. The in lab lectures were also very helpful as they covered material that wasn't covered as clearly in class.

6. the labs were excellent it followed what were were reading in the book. Having an lab instructor who knows the subject really helped.

What aspects of this class detracted from your learning?

1. My first impression of Nicole Hamilton was that she was overbearing, which caused me to be afraid to ask questions during lab times. However I came to respect Nicole Hamilton by the end of the quarter.

2. The workload is difficult to complete without regularly attending the open lab sessions, which I feel is not well represented by the single lab session per week on the schedule. That said, after rearranging my schedule a month into the course, I was able to complete the work without too much trouble.

3. The lack of connection between the lecture and the lab.

4. Was kinda hard to see the projector screen from most of the seats in the room (Beardsley lab).

5. The undefined due dates for certain labs allowed me to procrastinate although I was advised that I would have to make up late work at the end of the quarter.

6. none.

What suggestions do you have for improving the class?

3. I wish the lecture and lab were more in sync of what was being learned and applied. This would help in learning verilog more effectively.

4. Just the projector thing from above. Easy to move to see it temporarily though so not the worst.

5. It would have been interesting to introduce us to multiple different ways to solve certain design problems.

6. Nothing needs to change in the lab. Is excellent as is.

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.