IASystem
The Course Evaluation Standard

COURSE SUMMARY REPORT
Numeric Responses

University of Washington, Bothell
Sci, Tech, Engr. & Math
Science, Tech, Engr. & Math
Term: Autumn 2017

CSS 132 A
Computer Programming For Engineers I
Course type: Face-to-Face

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

Evaluation Delivery: Online
Evaluation Form: D
Responses: 17/26 (65% 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
	3.1	**0**
	(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	18%	18%	35%	18%	6%	6%	3.1	0	1
The course content was:	17	24%	29%	24%	12%	12%		3.6	2	2
The instructor's contribution to the course was:	17	24%	24%	24%	18%	12%		3.4	1	1
The instructor's effectiveness in teaching the subject matter was:	17	6%	18%	29%	18%	18%	12%	2.6	0	0

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	6%	18%	41%	12%	18%		6%	4.9	2	3
The intellectual challenge presented was:	17	24%	47%	24%	6%				5.9	6	5
The amount of effort you put into this course was:	17	53%	35%	12%					6.6	9	9
The amount of effort to succeed in this course was:	17	59%	24%	12%	6%				6.7	9	9
Your involvement in course (doing assignments, attending classes, etc.) was:	17	65%	24%	6%	6%				6.7	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: 11.4 Hours per credit: 2.3 (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
		12%			41%		24%	18%		6%	

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

Class median: 7.2 Hours per credit: 1.4 (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
12%	12%	12%	18%	12%	18%		6%	12%			

What grade do you expect in this course?

Class median: 3.0 (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%		18%	29%	12%	12%	12%								

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
35%	18%			47%	

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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
Course organization was:	17	12%	18%	41%	18%	12%		3.0	1	1
Sequential presentation of concepts was:	17	12%	24%	29%	24%	12%		3.0	0	1
Explanations by instructor were:	17	18%	6%	24%	29%	24%		2.4	0	0
Instructor's ability to present alternative explanations when needed was:	17	18%	12%	24%	35%	12%		2.6	0	0
Instructor's use of examples and illustrations was:	17	12%	24%	35%	18%	12%		3.1	0	0
Quality of questions or problems raised by the instructor was:	17	18%	24%	29%	12%	18%		3.2	0	0
Contribution of assignments to understanding course content was:	17	18%	18%	29%	18%	18%		3.0	0	0
Instructor's enthusiasm was:	17	29%	18%	41%	6%	6%		3.4	0	0
Instructor's ability to deal with student difficulties was:	17	12%	24%	18%	12%	18%	18%	2.7	0	0
Answers to student questions were:	17	18%	12%	29%	24%	12%	6%	2.8	0	0
Availability of extra help when needed was:	17	18%	6%	35%	24%	18%		2.8	0	0
Use of class time was:	17	12%	24%	29%	18%	12%	6%	3.0	0	1
Instructor's interest in whether students learned was:	17	24%	29%	18%	12%	12%	6%	3.6	1	1
Amount you learned in the course was:	17	29%	24%	24%	12%		12%	3.6	2	2
Relevance and usefulness of course content were:	17	24%	29%	29%	12%	6%		3.6	1	1
Evaluative and grading techniques (tests, papers, projects, etc.) were:	17	6%	18%	6%	29%	12%	29%	1.8	0	0
Reasonableness of assigned work was:	17	12%	29%	29%	18%	12%		3.2	1	1
Clarity of student responsibilities and requirements was:	17	18%	24%	18%	12%	18%	12%	3.0	0	0

COURSE SUMMARY REPORT
Student Comments

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STANDARD OPEN-ENDED QUESTIONS

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

1. This class was intellectually stimulating and there was a lot of thinking involved. The assignments were very hard especially for those that did not prior knowledge in C programming.

2. The class stretched my knowledge and abilities in programming but not so much as to make the content impossible. There was a good balance.

3. Yes this class was very intellectually stimulating. It brought up many different techniques and concepts that I found interesting.

4. Yes, it is a new way of thinking that required you learn in a different way.

6. Expanded my cultural understand of computers and computer people.

7. it was very stimulating, in terms of stress and difficulty

8. Yes

9. Yes it man me think of things differently.

11. This class was difficult in trying to picture what was going to happen with the code and debugging was also hard at times.

12. Yes the class was intellectually stimulating but this is not a 100 level class. Also this class should have a basis of coding it is not a beginning class for someone who has never coded before.

13. Yes, knowing how to read programming symbols, syntax, and how to understand the flow of a code in just a week is extremely tough for many students who don't have any prior programming experiences. I feel like after working so hard throughout the quarter, the main thing that intellectually stimulates my brain is the competition to achieve good grades in the class. Improve, improve, and improve is what makes me stretch my thinking in passing the class with decent grade.

14. Yes, I liked the challenge because it exercised my mind.

15. Yes, I have never coded in C before so this class really stretched my thinking. I had to think differently than normal which made this class really hard.

16. Yes, I believe that CSS132 was a great and, intellectually stimulating. The topics covered in class were exactly what I need and on par with industry requirement.

What aspects of this class contributed most to your learning?

1. Most of my learning came from reviewing the slides and doing some homework assignments. Also working with other students outside of class helped me get through the course.

2. The scaffolding, practice exam material, and test structure were very helpful in minimizing stress while letting me apply the intended concepts.

3. The aspects that most contributed to my grade were the homework assignments and lab assignments because it gave me hands on work.

4. homework

6. Projects and home assignments. Group work and lab

7. not much, what helped the most were my other classmates because we all struggled so much that we needed each others backs.

8. In class practice , homework assignments, practice midterms/review exercises, and lab assignments.

9. all of this information made me understand how programs work.

11. Going to class and working with my friends on problems.

12. In class work

13. Offer of help from instructor's extended office hours and tutoring.

14. Seeing the instructor's examples in practice and on slides

15. In class examples

16. I feel that the lectures were well prepared and presented in such a way that made it easier for me to learn.

What aspects of this class detracted from your learning?

1. Sometimes class was not very effective. Starting class at 5:45pm and ending at 7:45pm was a factor that did not work well with my schedule although I did go to class on the assigned days. Reading the online textbook was not a lot of help to advance my learning. Not getting additional help was another factor that detracted from my learning. Only one tutor was available on campus to get extra help and the hours that the tutor was available were on the hours that I had to go to class for certain days.

2. The class was split between skill levels. The more novice computer users dictated the pace and content of the class to a degree that I found distracting from my own progress. These students might benefit from a prerequisite class. Also, the exam point system was setup in a way that it was easy for one error to cost a lot of points. For example, one line of code could drop the exam grade by one letter with zero opportunity for partial credit. More exam content could allow students the opportunity to demonstrate their understanding of course material.

3. The aspects that detracted from my learning was that the labs and lectures seemed to be off from each other. Learned in lab before I learned in lecture.

4. n/a

6. Grading policy. Feeling discouraged even though I'm proud of my work and progress

8. There are very few tutors who have knowledge of C which sometimes made it difficult to find help with assignments.

9. The fact that there is only one tutor that can help with this class in the whole university.

11. Lack of in class practice.

12. Instructor's grading technique and unwillingness to budge when discussing grades and performance.

13. 1. Unorganized content flow. 2. Unclear clarity of voice from the instructor. 3. Passive lectures that rely hard on powerpoint slides. 4. Instructor always attempts to write on the whiteboard with red marker which makes students difficult to see from a distance in a bright room. 4. Instructor oftentimes assume students know what he is doing (while coding). 5. Very quick flow of lecture without concerning students' understanding. 6. Instructor is not helpful in giving partial credits (grading is super strict). 7. The instructor's harsh attitude intimidate some student in the class (exposed through message and sometimes in the class). 8. Extremely tough weekly assignments for students with minimum or no programming experiences.

14. Lack of practicing in class aside from the labs

15. Reading code from a power point slide rather than in class live coding

16. None that I can think of. The class overall is great and Dr. Pisan is very helpful and understanding.

What suggestions do you have for improving the class?

1. I would suggest to have more of in class practice problems and then a key solution posted to all the in class work afterwards. More practice in coding was required so we would not have struggled so much in doing the homework assignments. Also having more resources such as more tutors would have been beneficial in increasing our understanding and get our questions answered.

2. See previous.

3. Work on aligning lab and lectures more. Homework was very difficult to complete.

4. Be more flexible with grading. Don't take the rubric as the grading bible. A single small mistake on one of the problems should not move your test grade by an entire letter grade (from an A to a B). Also be more understanding of the steep learning curve at the beginning of the class.

5. This class is designed for EE students who are completely new to programming, we should be exported to the form of the test/exam more.

6. New grading policy that allows for partial credit for competent coding attempts.

7. There are only two people in the university that can help us, which are the professor, and the grader, whom the professor has instructed to the grader to be very vague if we were to asked him questions regarding the assignment

8. The introduction of the material could be improved. As someone who has never programmed I found the first few weeks of lecture to be difficult to understand without some background in programming.

9. Have more tutors, more practice since it is a beginner programming class that is very difficult.

10. better grading, better teacher. I spent all my qtr dedicated o this course in result filed all other and probably this course too. Intro to programming shouldn't be this hard or demanding.

11. Provide one day out of the week for lecture and the other day for practicing code. Also not posting the answers to the exam right as grades get posted because students can't argue for points if the answers already have been posted.

12. Slower progression through the topics and being more understanding of the extremely steep learning curve required for this course.

13. A serious assessment for this instructor is highly encouraged.

14. At least an hour of in-class practice would be helpful

15. More in class coding. I was able to grasp the concept better through live coding rather than writing on the white board

16. None. Keep up the great job Dr. Pisan!

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).

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[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.