**IASystem**
The Course Evaluation Standard

**COURSE SUMMARY REPORT**
Numeric Responses

University of Washington, Seattle
College of Arts and Sciences
Biology
Term: Autumn 2016

BIOL 180 BA
Introductory Biology
Course type: Face-to-Face

Evaluation Delivery: Online
Evaluation Form: H
Responses: 16/22 (73% very high)

Taught by: John Parks, Lea Savolainen, Matthew George
**Instructor Evaluated: Matthew George-Predoc TA**

**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:

| Combined Median | Adjusted Combined Median |
|---|---|
| **4.4** | **4.5** |

(0=lowest; 5=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 | Adjusted Median |
|---|---|---|---|---|---|---|---|---|---|
| The lab section as a whole was: | 16 | 44% | 25% | 25% | 6% | | | 4.2 | 4.4 |
| The content of the lab section was: | 16 | 31% | 25% | 19% | 25% | | | 3.8 | 3.9 |
| The lab instructor's contribution to the course was: | 16 | 56% | 25% | 12% | 6% | | | 4.6 | 4.7 |
| The lab instructor's effectiveness in teaching the subject matter was: | 16 | 56% | 19% | 19% | 6% | | | 4.6 | 4.7 |

## STUDENT ENGAGEMENT

| Relative to other college courses you have taken: | N | Much Higher (7) | (6) | (5) | Average (4) | (3) | (2) | Much Lower (1) | Median |
|---|---|---|---|---|---|---|---|---|---|
| Do you expect your grade in this course to be: | 16 | 6% | 25% | 19% | 38% | 12% | | | 4.5 |
| The intellectual challenge presented was: | 16 | 12% | 44% | 12% | 31% | | | | 5.6 |
| The amount of effort you put into this course was: | 16 | 25% | 38% | 12% | 25% | | | | 5.8 |
| The amount of effort to succeed in this course was: | 16 | 38% | 25% | 19% | 19% | | | | 6.0 |
| Your involvement in course (doing assignments, attending classes, etc.) was: | 16 | 31% | 31% | 6% | 31% | | | | 5.9 |

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: 8.2 (N=16)**

| 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% | 6% | 12% | 19% | 6% | 6% | 6% | 6% | 6% | | 6% |

From the total average hours above, how many do you consider were valuable in advancing your education? **Class median: 8.8 (N=16)**

| 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% | 19% | 12% | | 19% | 12% | 12% | 12% | 6% | | | |

What grade do you expect in this course? **Class median: 3.2 (N=16)**

| 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) | F (0.0) | Pass | Credit | No Credit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12% | 12% | 31% | 19% | 12% | 6% | 6% | | | | | | | | |

In regard to your academic program, is this course best described as: **(N=16)**

| In your major | A core/distribution requirement | An elective | In your minor | A program requirement | Other |
|---|---|---|---|---|---|
| 38% | 31% | 12% | | | 19% |

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**STANDARD FORMATIVE ITEMS**

| | N | Excellent (5) | Very Good (4) | Good (3) | Fair (2) | Poor (1) | Very Poor (0) | Median | Relative Rank |
|---|---|---|---|---|---|---|---|---|---|
| Explanations by the lab instructor were: | 16 | 62% | 6% | 19% | 12% | | | 4.7 | 1 |
| Lab instructor's preparedness for lab sessions was: | 16 | 50% | 38% | 6% | 6% | | | 4.5 | 16 |
| Quality of questions or problems raised by the lab instructor was: | 16 | 56% | 12% | 25% | 6% | | | 4.6 | 4 |
| Lab instructor's enthusiasm was: | 16 | 50% | 19% | 12% | 19% | | | 4.5 | 17 |
| Student confidence in lab instructor's knowledge was: | 16 | 69% | 6% | 19% | 6% | | | 4.8 | 7 |
| Lab instructor's ability to solve unexpected problems was: | 16 | 50% | 19% | 19% | 12% | | | 4.5 | 14 |
| Answers to student questions were: | 16 | 50% | 19% | 19% | 12% | | | 4.5 | 13 |
| Interest level of lab sessions was: | 16 | 38% | 25% | 19% | 19% | | | 4.0 | 18 |
| Communication and enforcement of safety procedures were: | 16 | 56% | 19% | 19% | 6% | | | 4.6 | 11 |
| Lab instructor's ability to deal with student difficulties was: | 16 | 50% | 19% | 19% | 12% | | | 4.5 | 10 |
| Availability of extra help when needed was: | 16 | 56% | 12% | 25% | 6% | | | 4.6 | 6 |
| Use of lab section time was: | 16 | 56% | 6% | 31% | 6% | | | 4.6 | 2 |
| Lab instructor's interest in whether students learned was: | 16 | 50% | 19% | 25% | 6% | | | 4.5 | 15 |
| Amount you learned in the lab sections was: | 16 | 56% | 6% | 12% | 25% | | | 4.6 | 3 |
| Relevance and usefulness of lab section content were: | 16 | 50% | 12% | 25% | 12% | | | 4.5 | 12 |
| Coordination between lectures and lab activities was: | 16 | 50% | 25% | 19% | 6% | | | 4.5 | 5 |
| Reasonableness of assigned work for lab section was: | 16 | 50% | 25% | 19% | 6% | | | 4.5 | 8 |
| Clarity of student responsibilities and requirements was: | 16 | 50% | 19% | 19% | 6% | 6% | | 4.5 | 9 |

**COURSE SUMMARY REPORT**
Student Comments

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BIOL 180 BA
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**STANDARD OPEN-ENDED QUESTIONS**

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

1. Not really, this class was mainly conceptual and nothing really surprised me or blew my mind.

2. I learned a lot of the content in AP Bio, so there were only a few new things. However, the method of thinking is different than other classes, which made it a bit more stimulating.

3. This class forced me to learn how to explain things, the hardest part was not knowing the material, but answering exam questions in a way that would receive full credit, was concise, and logical.

4. This class was very intellectually stimulating, both because biology is a fascinating subject, and because the class was taught in such a way that we knew the basics of what we were doing, but were encouraged to take that understanding and apply it to different kinds of questions. Some classes will just give you a question without any indication of how one might find the answer, then teach you the "right" way afterward, or give you lots of data with no context, and try to figure out what it means which has always annoyed me. This class proved that learning by doing is possible, and really effective when done correctly.

5. yes, it is the lab that students need to think through from the very first to the last to make sense the experiment nicely

6. It stretched my thinking in terms of my skills as a researcher. It made me really think about things that are applicable, like experimental design, and it didn't make me focus on useless stuff like memorizing the geological periods.

7. Yes it did stretch my thinking. It made me think deeper than just facts and go into why those facts were true and dissect the evidence that supported them.

8. yes, yes. It brought forward ideas i had never considered before.

9. Hell yes. In high school, Bio had been all about memorization. Now, it's about actually understanding the processes and functions of systems in Biology. Honestly, this class–and especially lab with Matt–was amazing.

10. Sure, the labs were interesting; it was fun thinking of ways to analyze the data from the class datasets.

11. Yes

12. Yes, and I think lab was helpful in backing up the concepts we learned in class

13. yes

14. Not very much. Some were interesting but most only needed common sense

15. The labs were mentally stimulating

16. I found the class to be extremely relevant in terms of things happening in the world, so it was definitely easy to apply things taught in the class to the real world and stretch my thinking in that way.

**What aspects of this class contributed most to your learning?**

1. The study questions and in class polling questions

2. The combination of reading, taking a quiz, then listening in class, and studying through my notes and the study questions all helped.

3. Readings contributed to my learning while labs and lecture helped me further my understanding of the material i learned in the reading.

4. Lecture was probably the most important part. While the reading got through the basics, the real meat of the learning, and interesting examples and exercises on the material during lecture cemented in the concepts. Lab was of course also very useful for clarifying anything we didn't understand.

5. the actual process of the experiement

6. The friday review questions and monday practice tests. Also, just coming to lecture and paying attention.

7. The reading quizzes really helped myself to not fall behind on lecture and reading material

8. the lectures, and labs.

9. Lab with Matt. Lectures are hard to understand without a proper lab to put it all into practice. Matt was awesome as a TA because he knew everything about what we were doing, and even helped us out with random questions we had in class. I took Bio just for kicks(I'm a business major), and lectures with Dr. Cooper and Dr. Freeman, and lab with Matt really did make this a worthwhile experience. Loved it!

10. Designing experiments to test hypotheses about datasets.

11. The hands on activities in lab

12. Lecture and lab

13. yes

14. The hands-on part

15. Hands on work . Last 2 labs

16. I think the labs in general were definitely the biggest contributors to my learning because it was where concept's learned in class were actually applied

## What aspects of this class detracted from your learning?

1. the reading quizzes

2. I don't like that the reading questions and the book content don't always line up to the course content. I sometimes overstudy the book and end up with much more knowledge on subjects that aren't as covered.

3. The fact that the reading quizzes were only open from like 4:30 to 8 am, they should open earlier and close later, because I would do my reading in the mornings, and then would sometimes forget to do the reading quizzes at night which was frustrating.

4. There was sometimes a problem with people getting off task, particularly with some of the data collection portions, where it was inefficient to have more than one or two people working on the project.

6. The in-class worksheets did no detract, but I did not feel like I gained anything from them.

7. N/A

8. n/a

9. Nothing really. I guess I could complain about some of the desks in the lecture hall? Some don't even have the desk part!

10. Not much really, the class was pretty informative.

12. Study questions

13. yes

14. The time probably lol

15. Overly tedious for no reason work.

16. Nothing really...

## What suggestions do you have for improving the class?

1. Nothing

2. Update the reading quizzes.

3. Smaller class sizes, covering more detailed material in lecture, extending the length which reading quizzes are open, opening practice tests over the weekend. Make labs worth less points.

4. I personally think that 4 people is too many for a lab group. It does split up the work, but in my experience, it is much harder to communicate to a larger group, especially when half of the group is seated opposite a large table.

6. None.

7. N/A

8. have the person writing the exams write the study questions.

9. Nothing. Keep at it!

10. The class was pretty great, it was pretty cool hearing all of the interesting facts that Matt knows.

12. Be more clear about which study questions are helpful, how we are expected to answer questions on the exam

13. yes

14. -

15. Less busy work

16. I would like to talk a little bit about the exams in class after we take them. I want to review the most missed questions and most common errors. It would be nice to understand things I didn't get instead of just forgetting about them after the exam.

*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.