COURSE SUMMARY REPORT
Numeric Responses

University of Washington, Seattle
College of the Environment
School of Environmental and Forest Sciences
Term: Autumn 2019

IASystem — The Course Evaluation Standard

SEFS 590 C
Graduate Studies
Course type: Face-to-Face

Taught by: Laura Prugh
Instructor Evaluated: Laura Prugh-Assoc Prof

Evaluation Delivery: Online
Evaluation Form: X
Responses: 8/9 (89% very 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:

Combined Median	Adjusted Combined Median
4.4	**4.3**

(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: 5.0
(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 course as a whole was:	8	50%	25%	25%				4.5	4.4
The course content was:	8	50%	38%	12%				4.5	4.4
The instructor's contribution to the course was:	8	62%	25%	12%				4.7	4.6
The instructor's effectiveness in teaching the subject matter was:	8	25%	75%					4.2	4.1

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:	8	12%	12%	25%	50%				4.5
The intellectual challenge presented was:	8	12%	50%	12%	25%				5.8
The amount of effort you put into this course was:	8	25%	25%	38%	12%				5.5
The amount of effort to succeed in this course was:	8	38%	12%	25%	25%				5.5
Your involvement in course (doing assignments, attending classes, etc.) was:	8	38%	12%	25%	25%				5.5

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 Hours per credit: 2.3 (N=8)

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%	50%	25%		12%					

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

Class median: 6.2 Hours per credit: 2.1 (N=8)

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%	75%								

What grade do you expect in this course?

Class median: 3.6 (N=8)

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
25%	50%	25%												

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

(N=8)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
	12%	88%			

COURSE SUMMARY REPORT
Numeric Responses

University of Washington, Seattle
College of the Environment
School of Environmental and Forest Sciences
Term: Autumn 2019

IASystem
The Course Evaluation Standard

STANDARD FORMATIVE ITEMS

How frequently was each of the following a true description of this course?	N	Always (7)	(6)	(5)	About Half (4)	(3)	(2)	Never (1)	Median	Relative Rank
The instructor gave very clear explanations.	8	25%	62%	12%					6.1	9
The instructor successfully rephrased explanations to clear up confusion.	8	38%	62%						6.3	8
Class sessions were interesting and engaging.	8	25%	75%						6.2	7
Class sessions were well organized.	8	25%	62%	12%					6.1	10
Student participation was encouraged.	8	88%	12%						6.9	3
Students were aware of what was expected of them.	8	25%	12%	50%	12%				5.2	11
Extra help was readily available.	8	62%	38%						6.7	6
Assigned readings and other out-of-class work were valuable.	8	62%	38%						6.7	4
Grades were assigned fairly.	8	75%	25%						6.8	5
Meaningful feedback on tests and other work was provided.	8	88%	12%						6.9	2
Evaluation of student performance was related to important course goals.	8	88%	12%						6.9	1

Relative to other college courses you have taken, how would you describe your progress in this course with regards to:	N	Great (7)	(6)	(5)	Average (4)	(3)	(2)	None (1)	Median	Relative Rank
Learning the conceptual and factual knowledge of this course.	8	38%	38%	12%	12%				6.2	7
Developing an appreciation for the field in which this course resides.	8	62%	25%		12%				6.7	3
Understanding written material in this field.	8	62%	25%		12%				6.7	1
Developing an ability to express yourself in writing or orally in this field.	8	62%	12%	25%					6.7	2
Understanding and solving problems in this field.	8	38%	38%	25%					6.2	6
Applying the course material to real world issues or other disciplines.	8	50%	25%	25%					6.5	5
General intellectual development.	8	50%	38%	12%					6.5	4

COURSE SUMMARY REPORT
Student Comments

University of Washington, Seattle
College of the Environment
School of Environmental and Forest Sciences
Term: Autumn 2019

IASystem
The Course Evaluation Standard

SEFS 590 C	Evaluation Delivery: Online
Graduate Studies	Evaluation Form: X
Course type: Face-to-Face	Responses: 8/9 (89% very high)

Taught by: Laura Prugh
Instructor Evaluated: Laura Prugh-Assoc Prof

STANDARD OPEN-ENDED QUESTIONS

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

1. Yes. It taught me a whole new type of analysis for science. It gave me another "tool" for which to answer questions of interest.

2. yes - especially learning the different statistical tests and when to apply them, and thinking about the type of questions that lend themselves well to meta-analyses.

3. This class introduced me to a new form of analysis that I'd heard about but had never really understood. It gave me a much greater appreciation for the amount of work that goes into a meta-analysis (holy moly!) and taught me how to critically evaluate meta-analyses in the literature. It made me think about how to gather, summarize, and analyze data in a new way that is very different from how I usually think about data collection and analyses. It also made me reflect on how to present results in future manuscripts so they are more easily accessible for potential meta-analyses in the future. This was a great class! Thank you for offering it.

4. It was very intellectually stimulating! Its an excellent topic for a class, as meta-analysis is a skill that seems to just be learned ad-hoc by most ecologists who have used it in the past, and that isn't a great way to standardize quantitative techniques for future generations' use.

5. This class was very intellectually stimulating. It was fun and exciting to think in terms of meta-analysis and realized its potential. I'm hooked!

7. Learning and attempting to understand how meta-analyses are conducted was definitely intellectually stimulating. Learning the types of stats used was really interested as they were not equations or metrics I had come across before.

What aspects of this class contributed most to your learning?

1. I liked that we were conducting our own meta-analysis. Sometimes the concepts were abstract, but simultaneously conducting a meta-analysis gave me an extra opportunity to internalize the material.

2. discussing the meta-analyses in class, reading the textbook, conducting our own meta-analysis

3. It was very helpful to conduct our own meta-analysis to fully appreciate the full process. This taught me how to sort through an overwhelming heap of literature and gave me a greater appreciation for the kinds of subjective decisions you have to make when conducting this type of analysis but also how to be transparent and up-front about those decisions. Reading examples of meta-analyses also gave me a better understanding of the breadth of research questions that can be addressed through a meta-analysis and the power you have to find consensus in the literature by accumulating knowledge in a quantitative way.

4. I appreciated interspersing article discussions the way we did, it was helpful to be reading and critiquing published meta-analyses as we were starting to work on our own. The textbook was also an excellent resource, and the time spent in class reviewing the textbook material in the first half of the quarter was extremely helpful.

5. Lectures and readings were very helpful and undertaking a meta-analysis project provided a steep learning curve.

6. The lectures/R exercise were really helpful for learning the MA process. The class discussions on papers was also helpful to learn (good and bad) various methods.

7. Class lectures, book readings and class paper discussions. I think the paper discussions were really helpful in seeing how meta-analyses were conducted and what type of studies were being published.

What aspects of this class detracted from your learning?

1. I wish we were able to do the R in-class exam as an exam. I found the testing environment really stressful.

2. the amount of effort outside of class that went into gathering data from the literature.

3. I'm not sure the book was really necessary as required reading. If we had been able to actually start the analyses with our group projects I think the book would have been a valuable resource. But we did not get to that stage of the project, and much of what we read in the book was covered well in lecture.

4. Nothing comes to mind.

5. I spent a lot of time being uncertain about how exactly to extract and analysis meta-analysis data.

7. I thought the idea of the class project was really great and think that I learned a lot by doing the class project. However, I think it might be better if in an attempt to show more of the entire meta-analysis process students were allowed to extract data from maybe a subset of papers (not sure on what the best sample size would be) and then work through the statistical analysis and interpretation of results. The reading of so many papers increased my knowledge on MHW greatly but less so my knowledge on meta-analysis. It was really only when I was typing up the final review protocol that I really dived into the statistical methods aspect.

What suggestions do you have for improving the class?

1. I'd recommend changing the in-class exam to a take home. Especially because it was open book anyways, it didn't seem like having the test proctored was essential. The test material was fair, but it was really stressful to hear my fellow students around me, while I tried to focus on the questions at hand. It seemed like time was flexible (some students finished in an hour or so, some took closer to 2 or so hours). Given that people tend to code at different speeds, it seems like the take home environment would be a better vehicle for this sort of exam.

2. I think that this is a difficult topic to fit into a class structure, but Laura did a really good job with the class anyway! Maybe in the future, the class groups can be on two tracks - one for people who have a meta-analysis that they know they will publish as a dissertation or thesis chapter, and one for people who do not. For those who want to publish a specific meta-analysis, the existing class assignments, class time schedule, etc. is perfect. For those who do not, I thought that there could be at least one class in the beginning of the quarter for project scoping.

3. Although I enjoyed the paper discussions about various meta-analyses, I think these could be more structured in the future. Because they were mostly student-selected, it was difficult to know what we should take away from each paper and whether the papers were good or poor examples of how to conduct a meta-analysis. I think students would benefit from either having the instructor select the papers with the intention of highlighting specific aspects of the paper to focus on, or if there was more instructor input about the pros & cons of the student-selected papers during the discussion. The project was a great learning experience but I think it was a bit too big for a one-quarter class since it takes so long to search and screen the literature. I wonder if it would be better to have larger groups (e.g., 5-6 students) to more quickly divide and conquer the early stages of the project. Or provide more guidance on how to hone in on a good research question for a meta-analysis so that students have a better chance of pursuing a project that will yield data well-suited for this type of analysis. The in-class R work and exam were too long for a 1 hour meeting time. I think these should either be paired down or split up into multiple smaller assignments so they better fit within the time limits of the class.

4. Having the schedule worked out in advance would be good, as it was slightly stressful to not know what the expectations were, both for final product and intermediate points throughout the quarter. It also might be helpful to have more intermediate points for the project, like maybe a short, informal, written description of what has been accomplished and the process so far every 2 weeks or something like that. My group kind of did that on our own, and it made writing the final paper and final review protocol very simple, as most of it was already written.

5. More practice examples would be very useful to those who learn best by doing. It would have been very helpful to take a sample of papers on a topic and practice data extraction and to have conducted some more analyses with sample data.

6. I realize that this was a new course so I hope you can use what you have learned from us to create more set guidelines/benchmarks for the project. I also think this should have been a 4 unit class considering the amount of work that was put in outside of class time.

7. Besides what I wrote above, I think maybe clearer expectations for the final paper for the next years class. I know this was the first year and we weren't sure how long the first stages would take but maybe setting out the expectation earlier in the class that at the very least you would have enough data to complete what was required of us. This might help groups pace their work better. But I really think slightly cutting down on the paper extraction stage and allowing groups to work through analysis on a subset would be really helpful.

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.