

About the Course Report (with Comments): The purpose of this report is to provide a detailed look at student learning experience within one course. It displays student responses to the Course Experience (CE) survey **common core** and **discipline question** sets through means, standard deviations, response counts, and response distributions. You can find an overview of available CE Survey reporting [here](#). Information in this report can be used as part of the tenure, promotion, and review process as well as for other professional development and/or course design discussions. Where information is used as part of teaching performance review, it must be applied within the scope of the appropriate collective agreement; Articles 28.5 to 28.15 in the SFU Faculty Association (SFUFA) collective agreement (2019-2022) and Articles XVIII C, D, E, J in the Teaching and Support Staff Union (TSSU) collective agreement (2019-2022). For SFUFA instructors who have chosen not to include student comments (Article 28.9) in their review, please use the "Course Report (No Comments)".

The **Centre for Educational Excellence (CEE)** provides consultations on course, curriculum design, and teaching practice and are available to help you interpret and apply student feedback from the CE Survey.

Access to this report is granted at the discretion of the academic unit (with the Managers of Academic and Administrative Services as the main point of contact) to those who need the information to fulfill their role responsibilities at SFU. Typically, this will include Chairs, Directors, and Deans as well as Associates in these roles. Managers of Academic and Administrative Services as well as Program Assistants may also need access.

Responsible data use: The CE Survey data primarily serves to inform reflective teaching practices, curriculum design and program development by integrating student feedback. It should not be the sole criterion for evaluating teaching or comparing instructors due to its lack of contextual details such as class size and student demographics.

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Section 1 – Response Rate

Raters	Students
Responded	55
Invited	125
Response Ratio	44%

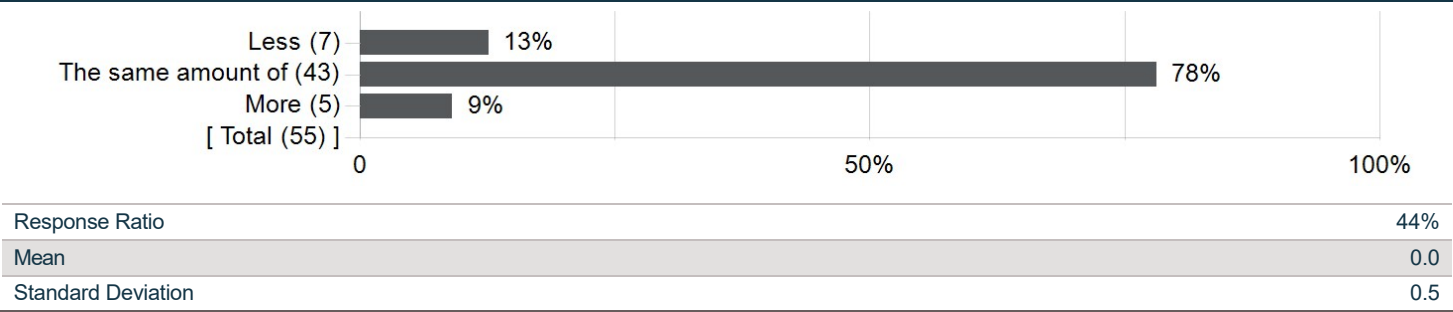
Section 2 – Common Core Questions

These questions appear on all course experience surveys at SFU and are selected by the Provost.

2.1 Course Workload

This question is about course workload.
SFU expects a student to spend 2-3 hours each week (both in class time and out of class work) per course credit. For example, if Physiology 101 is a 3-credit course, it would take 6-9 hours (on average) of a student's time each week. Courses that are shorter than 13-weeks or a typical semester are expected to require the same number of hours in fewer weeks.

I spent _____ time on ENSC 324 than expected based on its number of credits.



The mean score summarizes the overall reported workload for this course and can range from -1 to 1. It is scored as: Less time than expected = -1, The same amount of time as expected = 0, More time than expected = 1, given the SFU definition of a credit. The closer the mean score is to 0, the more it means that students reported the workload to be the same as expected.

2.1a You responded as having spent less time on ENSC 324 than expected. Please explain.

Comments
The assignments and lectures did not take too long to cover.
No lab for this course
no response
Too much homework from other classes due at the same time
The course content did not particularly appeal to me, so I was not too motivated to spend too much time on this course.
Different classes, relatively easier course material than others.

2.1b You responded as having spent the same amount of time on ENSC 324 as expected. Please explain.

Comments
Decent amount of workload, decent difficulty
I spent between 6–9 hours per week on ENSC 324.
I think the course was really well explained and spending the same amount of time as expected helps me understand all the formulas and work with the problems.
The amount of content covered in this course takes about the expected time per week
Although the nature of most problems in this course pertains to a "plug-and-chug" type of format, they still require plenty of thinking and understanding. If you do not know what is going on, the formula sheet will not help much. Therefore, simply keeping up with the material and completing the assignments properly requires a fair bit of time to complete. The course is set up well so that it does require you to put in a good bit of effort, but it does not feel completely overwhelming.
I believe it is enough time for me.
no
Not hard, able to complete everything within the due date
underestimated how much time you would need spend studying to excel in this course
3 credit course
The time–consumption required for this course was very reasonable. The work didn't require an unprecedented amount of time. The expected time to spend, matched with how much I actually spent.
I spent most of the time working on assignments and worksheets
Much studying and work needed but was right for amount of credits
I think if you incorporate the assignment, the exam grind, and the lectures plus the textbook readings, it probably adds up to that amount of time or slightly less.
Professor Shawn explains the material very well in class so usually spend 1 to 2 hours to review and 1 to 2 hours for assignments
The amount of homework and studying needed to do well on exams was fair
Difficult course but well taught and well guided
Between the 4 hours of lecture a week, the tutorials, assignments, and studying outside of class, it was about 7–8 hours a week
Expected to study a fair amount for an upper level engineering course and had planned accordingly
I think the amount of work was good for the amount of credit
Assignments could be quite lengthy, requiring one to go back and review the lectures and textbook.
One week I would spend 5, when an assignment was due it'd be 10–15
It was a reasonable amount of time for the number of credits, between class time, assignments, and self study.
The provided lecture structure and the other activities were not too challenging but enough for me to understand the topics
Course work was well balanced
I think I did spend more or less 9 hours per week on 324 with a little more when exams were near
The load compared to this class was the same as my other engineering classes.
I spent the expected amount of time on ENSC 324.
As a third year level course I expected it to be challenging at first it didn't seem so but the first exam showed how much time it really required and I was able to adjust to that
Fair class, learned a lot. Lectures were helpful but a little more focus on theory and derivations would have helped a lot more
The course was thoughtfully structured, with a clear alignment between the lecture slides and the textbook content. This consistency made it easier to follow and understand the material. The in–person lectures were particularly beneficial, as they provided valuable insights and deeper explanations of the concepts covered in the slides. Additionally, the tutorial worksheets were extremely helpful in reinforcing the lecture material, giving us the opportunity to practice and apply the concepts in a hands–on way. These worksheets were a great supplement to the lectures and really contributed to a more thorough understanding of the subject matter. The assignments were well–designed as well, closely mirroring the content presented in the lectures. This continuity ensured that we were adequately prepared for assessments, and the midterm exam reflected similar types of questions, reinforcing the connection between the coursework and the evaluation process. Overall, the course offered a coherent and comprehensive learning experience that was both challenging and rewarding.
Homework and tutorial assignments a standard amount of time, same with studying and doing practice exams
I mainly focused on the assignments, the worksheets and studying old practice tests

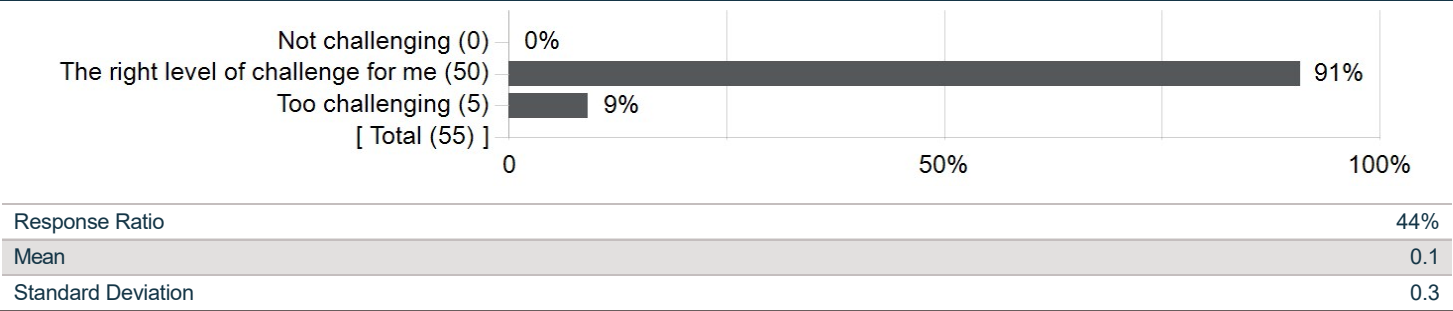
2.1b You responded as having spent more time on ENSC 324 than expected. Please explain.

Comments
The concepts covered in this course was extremely confusing and difficult to grasp so I spent more time trying to understand some of the concepts in this course.
The concept is tougher than I thought so I have to spend more time on researching relevent material.
The homework was difficult and took a lot of time to complete and as the course went on the tutorials got harder as well. Including midterm I would say that the study time it took just a little of 6–9 hours.
The tests were always more complicated and required more in depth knowledge than any practice or homework
I guess i was approaching this as if it were just a chemistry class, as long as you have the values, you can always just manipulate the formulas. I was wrong, and very wrong. The concepts, i don't know why, often put me in a loop but it was still manageable.

2.2 Course Challenge

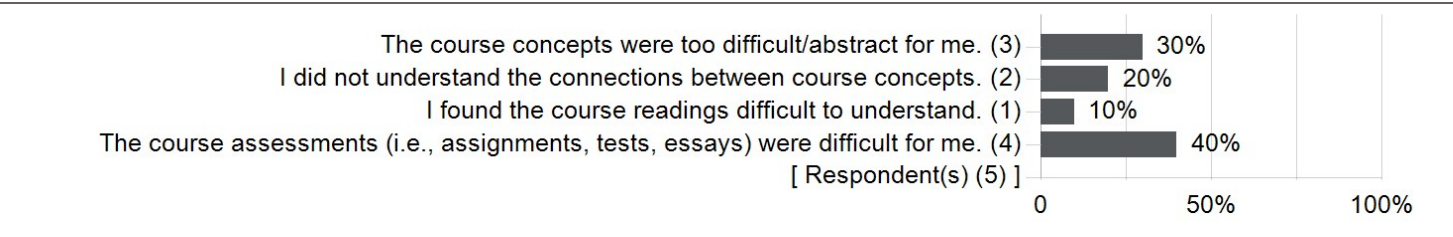
How challenging you find a course is related to how much effort you have to put in to be successful. This can depend on many factors, such as how fast or slow topics are covered or how much you know about the topic already.

I found ENSC 324 to be...



The mean score summarizes the overall perceived level of challenge for this course and can range from -1 to 1. It is scored as: Not challenging = -1, The right level of challenge for me = 0, Too challenging = 1. The closer the mean score is to 0, the more it means that students reported that the course was the right level of challenge for them.

2.2b Why did you rate ENSC 324 as too challenging?

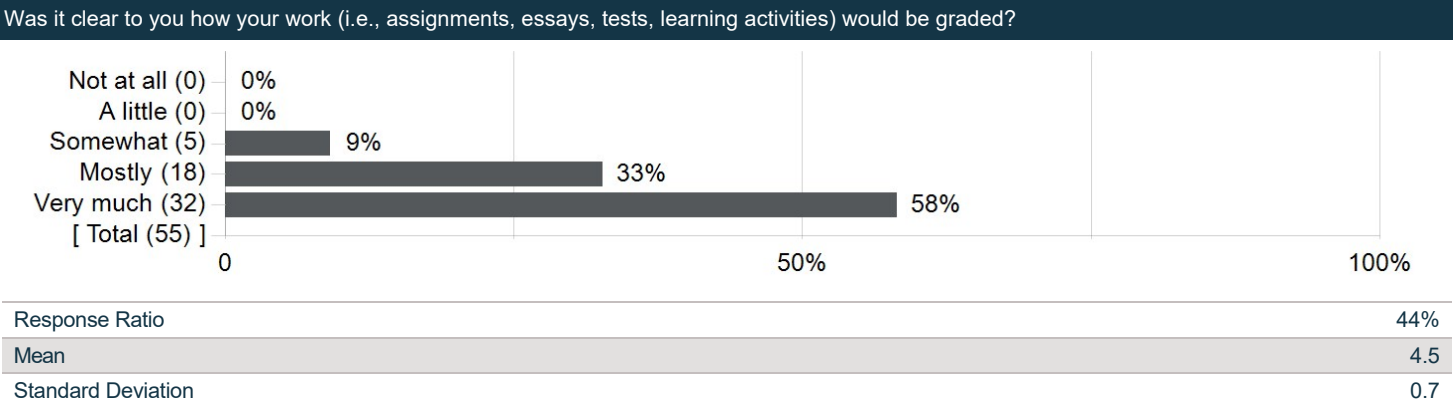


Note: Students were provided with a list of reasons to select with the option of adding an open-comment reason. Students could select multiple reasons.

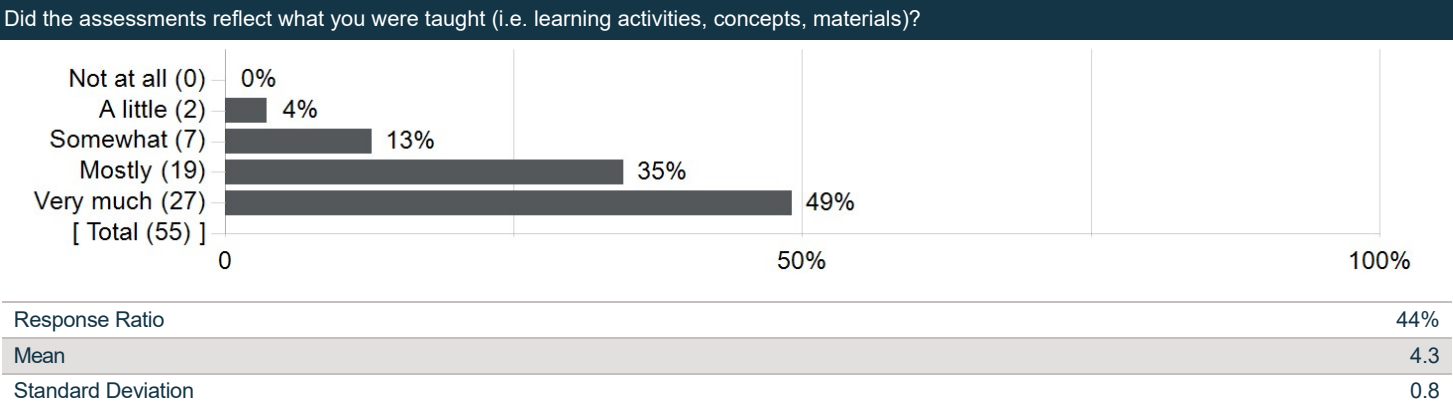
2.3 Assessments

For Q2.3a and Q2.3b, the mean score can range from 1 to 5. It is scored as: Not at all = 1, A little = 2, Somewhat = 3, Mostly = 4, Very much = 5

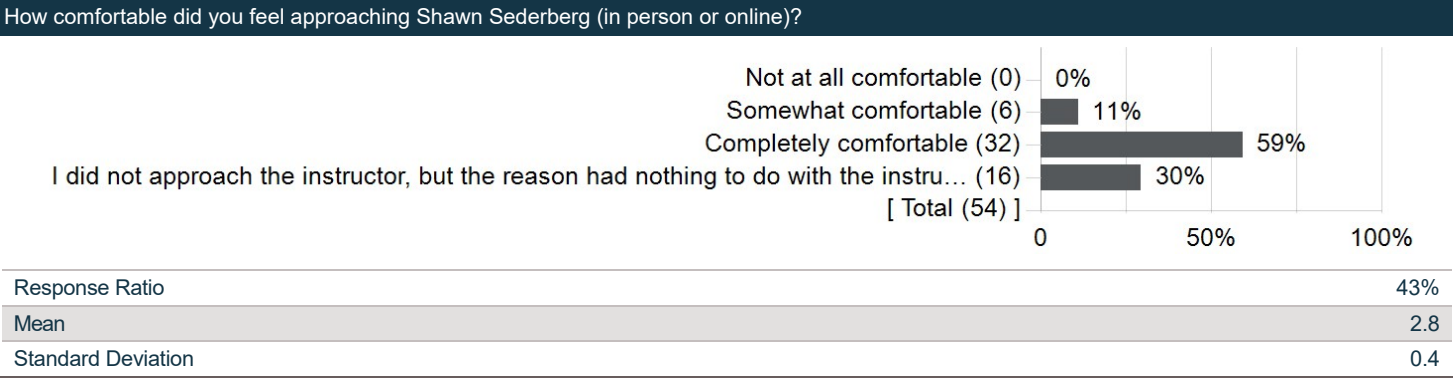
2.3a



2.3b



2.4 Comfort Approaching Instructor



The mean score summarizes the overall reported level of comfort approaching the instructor and can range from 1 to 3. In contrast with questions Q2.1 and Q2.2, 1 represents one end of the scale (Not at all comfortable), while 3 represents the other end of the scale (Completely comfortable). The middle of the scale is 2 (Somewhat comfortable). Responses for "I did not approach..." are excluded from the mean score.

2.4b You responded as having felt somewhat comfortable approaching Shawn Sederberg. Please explain your response.

Comments
Nothing to do with any lack of approachability on Assistant Professor Sederberg's part, I just don't like approaching people in general.
He is kind and explain in a way that students actually understand.
the lectures been given are good

2.4c You responded as having felt completely comfortable approaching Shawn Sederberg. Please explain your response.

Comments
He was always consistent with his office hours, able to answer students' questions well.
Extremely helpful when asking for questions about the course concept.
Very approachable and eager to help. Always available for help during office hours and tutorial times.
The professor was able available and ready to accommodate any situation and try to find a better solution for any problems I may have.
Unlike many other professors I have encountered, Professor Sederberg feels very reasonable and understanding. I greatly appreciate how fairly he treats students.
Was very open to feedback. Honest about when he was uncertain, but made sure to research to answer the question later to give an accurate answer.
chill guy
chill guy, doesn't seem to have a problem answering questions during tutorial or after class
Easy to approach and always there for help
Very cool dude
When I did have a question, I went to his office hours and asked him my questions
Very approachable, kind
Very approachable!
Dr Sederberg was very open to responding to questions and providing help. My only regret is not trying to speak to him more often by visiting him in his office hours more frequently.
Very nice professor and open to all questions
Incredibly friendly and helpful
Shawn is pretty available and approachable, especially in class
Easy to reach and very responsive
Nice guy, went to office hour, good talks
I had approached Dr. Sederberg for help, and he was very welcoming of my question and provided a comprehensible answer that was sufficient.
He was one of the most approachable instructor I ever had in my life. He made it sure that he was always available to assist
Shawn is a great and approachable guy
He teaches well, for a hard course he made it easier for the students and provided detailed notes.
I was comfortable meeting with an discussing any questions or concerns with Shawn Sederberg. He was always approachable and willing to answer any questions.
I emailed Shawn with questions a couple times as well as going to his office hours he was very helpful and easy to approach
V nice guy, never felt like I couldnt ask him about some question
The professor was very approachable, both during office hours and in the in-person lectures. He made himself available after class to address any questions, and his office hours were especially helpful for providing further clarification. Additionally, he was always willing to answer questions during lectures, creating an open and supportive learning environment.
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Shawn is very knowledgeable and understanding.

2.4d You responded that you didn't approach Shawn Sederberg, but the reason had nothing to do with their approachability. Please explain your response.

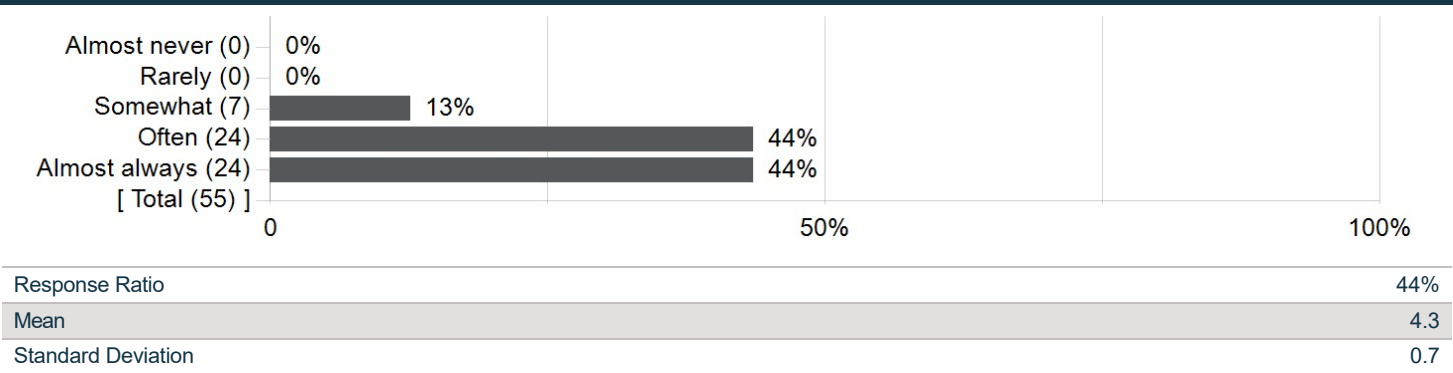
Comments
I felt I had no reason to approach him for questions
never needed
no comment
I didn't feel a need to, although he seemed very approachable and welcomed any inquiries.
I attended most of my lectures on zoom so i really didnt have much opportunity to get in contact with the professor.
Didnt need to
Questions were often answered in lectures either by the professor or TAs.
I would ask questions in class when applicable but I mostly went to TAs for help
Unfortunately I don't do very well with morning classes. I think it also has to do with the option of having Zoom. I would have really wanted to have approached and ask more questions for this class but I never did, I guess due to being on Zoom and also just from being too busy to attend office hours.
I was solely on zoom due to how far I lived from campus, but he was a great friendly teacher in the setting of teaching. I had reached out to TAs because I did not want to bother Dr. Sederberg.
I have other classes which I had to prioritize because I was struggling in them even more

2.5 Instructor

For Q2.5a - 2.5c, the mean score can range from 1 to 5. It is scored as: Almost never = 1, Rarely = 2, Sometimes/Somewhat = 3, Often = 4, Almost always = 5.

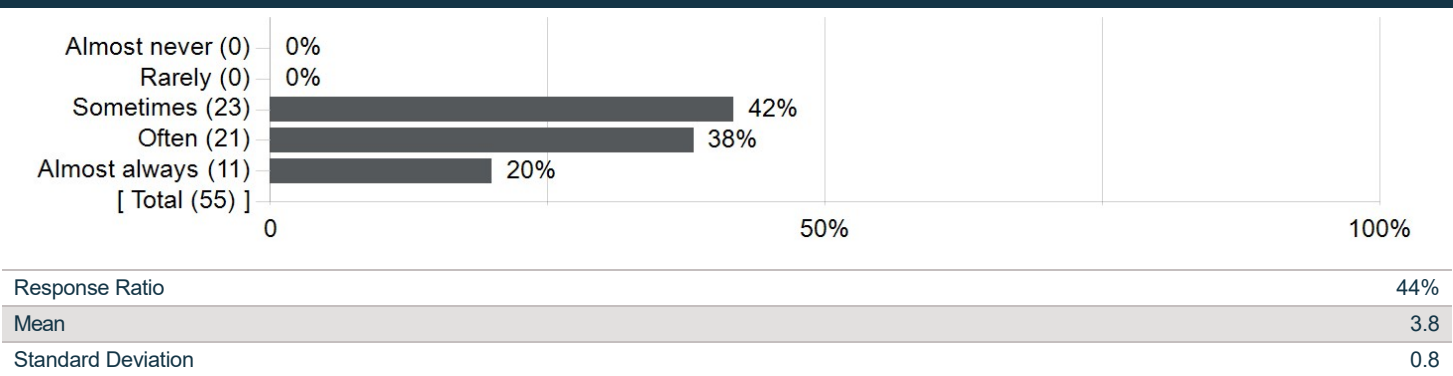
2.5a

I think Shawn Sederberg _____ tried to support student learning (i.e., used a variety of learning activities, invested in my success, invited and responded to student feedback).



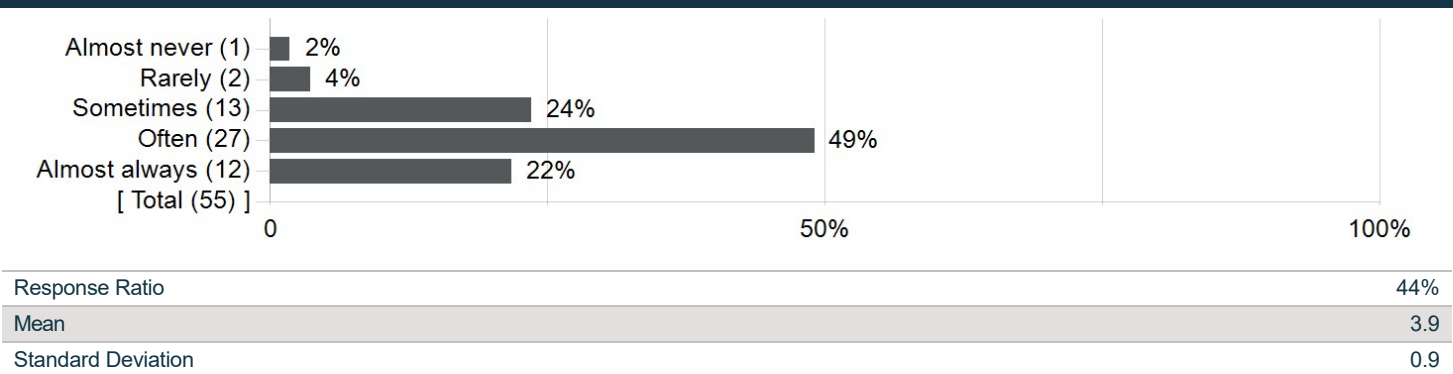
2.5b

I _____ felt engaged by Shawn Sederberg's teaching approach (i.e., activities, lectures, discussions).



2.5c

How often did you understand Shawn Sederberg's explanations of course concepts?



2.6 Which aspects of ENSC 324 helped you learn and why?

Comments
Plenty of assignment problems, Shawn being very approachable, and organized notes
The tutorials, lectures, and textbook helped me learn throughout ENSC 324.
The structure of weekly tutorial worksheets on Tuesday and weekly example questions on Thursday was extremely helpful in regularly reinforcing the course concepts.
The assignments and tutorials were particularly helpful.
All the worksheets really helped learning how you solve problems and use the various formulas provided.
The assignment questions and sample exams were good resources to help prepare me for exams. Having the solutions to these resources were helpful if I got a question wrong so I could see what was incorrect.
I think a very valuable part of how this course was put together was the weekly tutorials. 2-hour lectures require a lot of students' attention, and breaking it up with sections of time to help us actually work on problems was a big help. I would say it was even better than having a similar amount of examples solved during lectures. Also, the lecture slides were very well put together and provided plenty of information about the course content and served as an excellent resource to catch up or review the material.
It helped me learn to be better in studying haha.
Textbook
The tutorials and the weekly worksheets
Studying the textbook and previous exams
assignments covers most of the topics of the course and some of them is challenging
Lecture slides
no comment
The past exams and frequent tutorials, helped engage me more than if they weren't provided.
The textbook was cool, I did not attend class though
Posting materials from lectures, tutorials, ESPECIALLY practise midterms, exams, and quizzes
Prefer not to answer
The slides were excellent, they capture so much information within so little space.
The assignments and worksheets helped with the understanding of the material
The tutorials were very helpful, good understanding of concepts
studying for the midterms as well as the assignments.
The tutorial worksheet, and the in-class tutorial session with the TA really helped clear up a lot of confusion.
The worksheet and tutorial session are extremely helpful.
The homework and lectures and the inclass tutorials
Informative lecture slides, weekly tutorials and worksheets reinforced concepts taught
The worksheets and lecture notes are very helpful
The assignments and weekly tutorials were the best – but (so far) the midterms seemed a step or two above the difficulty of the homework.
The formula sheet is very helpful and TA tutorials are great
Weekly tutorial worksheets helped us better engage with the material.
The slides were well put together
The Assignments would good
The tutorials and tutorial notes were very helpful.
Tutorial assignments we're very good at keeping me on top of the material
The amount of tutorials, weekly worksheets, and practice exams especially helped me learn a lot. I think also Shawn's slides are really good though most often I find myself referring to the textbook to help me answer worksheets assignments.
The mini seminar sessions in the last 30 mins of class, going over practice problems really helped me grasp an idea for the concepts.
The tutorials at the end of every lecture were great for learning.
The weekly worksheets helped keep concepts fresh and apply them immediately helping to see which areas I needed to work on.
Delving deep into the semiconductor physics was definitely my fav part. Learned a lot and made a lot of unexpected connections.
assignments and tutorial questions were very helpful
The tutorials were very helpful and the questions were very similar to homework and exam questions. Shawn did a very good job of explaining and reviewing concepts at the beginning of every lecture. Lectures slide were very helpful.
Lecture notes!
The worksheets. They really are a great idea, as they have a grade component and a due date but if you make mistakes they do not significantly negatively impact your grade.
the diagrams

2.7 How would you improve ENSC 324 for future students?

Comments
Not that much, but if I have to pick one, tone down the jump in difficulty in assignment questions and exam questions
Make the challenging questions a bit easier similar to the past midterm from 2023.
Some of the homework questions state when $T = 300\text{ K}$, but for others you are expected to assume as much; either always state when $T = 300\text{ K}$, or just don't.
N/A
I would say more tutorial worksheets to make sure all the concepts are understood properly.
This is not exactly a proposed improvement, but if it's decided to have a third exam on the last day of classes instead of a final exam during the final exam period, then amount of time given for the third exam should be the entire class time. I understand that there needed to be a compromise and any solution would be unfavourable for someone. But I believe if a situation like this semester happens again, where there are two consecutive exams for courses with a decent amount of overlap, that the second exam gets delayed. Now from what I heard, Ash likely won't be teaching ENSC 225 next fall, so it's dependent on the next 225 instructor. But Ash's exams never take the full two hours, so we could have come to an agreement that the 225 exam would be delayed a little bit and the 324 exam would be the normal length. The difficulty of the exam questions was fair, but the the number of calculations required for BJTs and MOSFETs meant that a majority of students didn't finish on time due to the shortened exam time.
In terms of improvements, if there could be a way to skirt around the very first portion of this course that covered crystallography and quantum mechanics, then more time could be spent on the end results of diodes, BJTs, and MOSFETs. I understand that the content builds on itself, but the knowledge of, for example, the structure of silicon, didn't really give me a deep enough theoretical understanding of what's going on under the hood. I feel like because we already skip over certain derivations and the like, that the first portion of the course could be condensed quite a bit.
Honestly, I have no real quarrels with how this class was taught. Maybe the exams could have been made a bit less challenging, but Professor Sederberg recognized that, and that is all I need to hear from him about it. Overall, I am very satisfied with this course.
I think it is a well-structured course.
Why does it have to be so early in the morning
nothing
It's hard to improve a course that has a lot of material to go through in 3 months. So I have no criticism
maybe request students in the class to participate
Good enough
no comment
Better classroom, but the zoom sessions were nice
Lower the difficulty of assignment and exams would be best.
The exams felt really different to the assignments and worksheet questions. Maybe include 1 harder exam type question a assignment
Exams perhaps more closer to the material we review?
Go over more examples related to the midterm and assignments in class or in tutorials.
Hard to say. I think lectures that rely solely on slides and math are a bit "boring" to stay focused on and follow along, but given the nature of the course, it is hard to find interactive ways to really teach the material.
I would either give students more complicated practice questions or less hard exsm questiond
Exam diagrams are confusing and are not even similar to anything else in the course
less course distribution on exams and more on assignments
Not much
A better relation between the homework and assignment to the exams
I think the course structure and how its present is good
Having a zoom component was beneficial in case students could not attend a lecture in person, so that could be continued.
Can't think of anything
More difficult questions on par with exams would be nice.
N/A
Honestly nothing, course well well organized and well executed
I think overall Shawn's teaching was great. But one thing I strongly didn't like about the end of the course is that final exam (midterm 3) was at the last day of class, and not in the final exam period. Why is this a problem? Well, simply because a lot of other ENSC professors decided to have their final exam on the last days of the classes. This includes ENSC 225 and ENSC 316 (ENSC 477 was also a course who didn't have the final on finals week).
This makes things extremely difficult because many students have projects, final labs and final assignments due around the same time. In other words, everything piles up on the last week, and it ruins the point of having a finals week. The finals week is supposed to be when the finals happen. It's ridiculous to have three ENSC finals within the last days of class when there's projects and labs due. It certainly doesn't really help with making it so we get a longer break. ENSC 351 has its final on Dec 16 which is the day before the last day for finals. Professors choosing an earlier time for a final may make it very convenient for professors, but often not at all for students. Overall, I found the last two weeks of classes along ENSC 324 to be needlessly frustrating. You will find not many other faculties do this at all, not many decide to put the final outside of the final exam period.

Comments
Move the class to a later time in the day. The topics presented in ENSC 324 are theory-heavy, which can be hard to digest at 8:30 in the morning.
I improve it by adding more practice problems for students to get better for understanding the questions.
One thing that could be improved is the having one assignment question similar to the difficulty of the exam questions.
I would make the assignments at almost a similar difficulty level to the exams. Felt the exams were a bit more challenging than the assignments with the assignments giving a false sense of the difficulty well of the course.
Focus on theory and derivations more
make exams less difficult
I think sometimes the course could get a little bogged down in proofs, so maybe eliminate some of the proofs from the lecture slides (I think it's nice to have some proofs, but maybe just less)
As of now, I prefer how ENSC 324 is being taught.
Potentially bringing in more analogies, videos, or visual elements to certain areas (especially the quantum energy bands in the beginning). By discussing with no analogies you are as accurate as possible but cause a distinct boundary between what is understood and what should be understood.
It feels spot on for now, no complaints

Section 3 – Discipline Questions

Note for Fall 2024: Due to a system error, no discipline questions were included in the surveys for this term. Discipline questions will continue to be included in future terms, apologies for the inconvenience.