



Project Title: **2201 - Teaching Survey Fall 2019**

Courses Audience: **56**

Responses Received: **56**

Response Rate: **100%**

### Subject Details

Name	ENGR 0135 - STATICS & MECHC OF MATERIALS 1 - 1040 - Lecture
DEPARTMENT_CD	ENGR
CAMPUS_CD	PIT
SCHOOL_CD	ENGR
CLASS_NBR	13146
SECTION_NUMBER	1040
TERM_NUMBER	2201
COURSE_TYPE	Lecture
CLASS_ATTRIBUTE	
First Name	Matthew
Last Name	Barry
RANK_DESCR	Assistant Professor
TENURE	NT

### Report Comments

### Table of Contents:

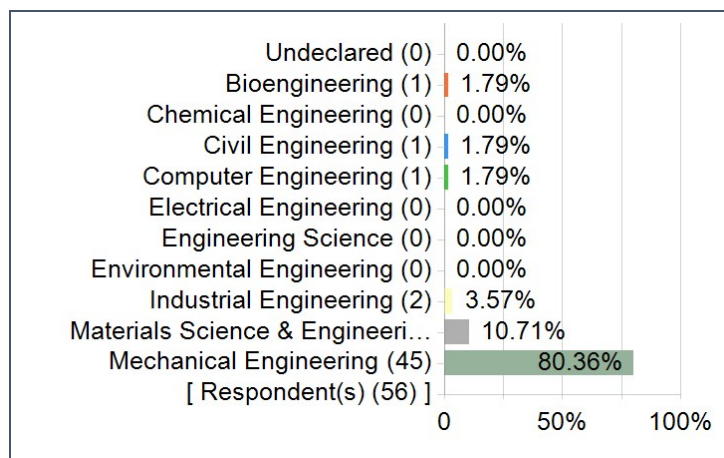
- I. Numerical results to Likert scaled items - Summary and Detailed Results
- II. Responses to Comments or Open-ended Questions
- III. Responses to additional School or Department Questions (if applicable)
- IV. Responses to additional QP/Custom Questions (if applicable)

### Collect student feedback early next term.

Beginning spring 2020, the Office of Measurement and Evaluation of Teaching (OMET) will offer a midterm course survey option. This option will be open to all instructors by request. [Read more about Midterm Course Surveys and the new OMET option.](#)

Creation Date: **Tuesday, January 14, 2020**

Please select the major you are enrolled in. Check at most 2 programs. If you are currently a freshman or an undeclared major, select your anticipated major from the list (or select Undeclared if you are unsure).



## University Questions

### Instructor Summary of Results - Scale: Strongly Disagree (1) to Strongly Agree (5)

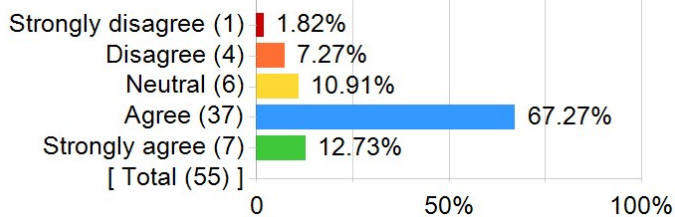
Question	Results		
	Response Count	Mean	Standard Deviation
The instructor stimulated my thinking.	55	3.82	0.82
The instructor was enthusiastic about teaching the course.	54	3.04	1.13
The instructor presented the course in an organized manner.	55	3.67	0.98
The instructor maintained an environment where students felt comfortable participating.	55	2.98	1.08
The instructor maintained an environment where students felt comfortable seeking assistance.	54	3.02	1.14
The instructor provided helpful feedback.	55	3.24	1.12
Assignments contributed to my understanding of the subject.	55	3.69	1.14
Overall	-	3.35	1.11

### Instructor's overall teaching effectiveness

Question	Results		
	Response Count	Mean	Standard Deviation
Express your judgment of the instructor's overall teaching effectiveness.	55	3.05	1.21

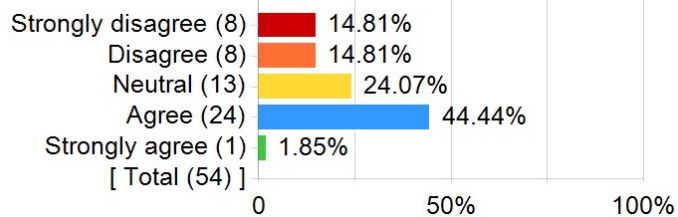
### Instructor Items: Detailed Results

### 1. The instructor stimulated my thinking.



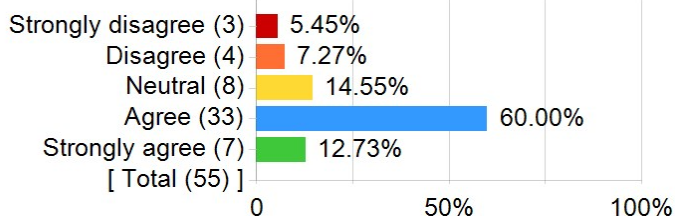
Statistics	Value
Invited Count	56
Response Count	55
Response Ratio	98.21%
Mean	3.82
Median	4.00
Mode	4

### 2. The instructor was enthusiastic about teaching the course.



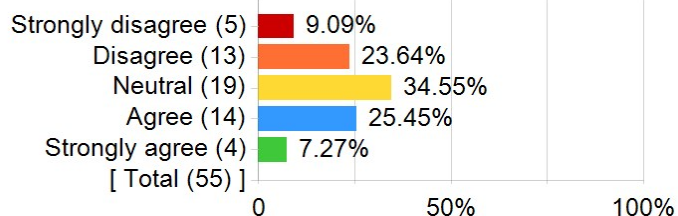
Statistics	Value
Invited Count	56
Response Count	54
Response Ratio	96.43%
Mean	3.04
Median	3.00
Mode	4

### 3. The instructor presented the course in an organized manner.



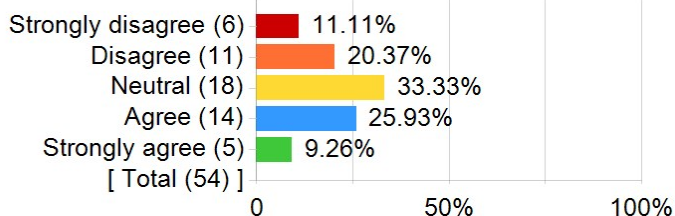
Statistics	Value
Invited Count	56
Response Count	55
Response Ratio	98.21%
Mean	3.67
Median	4.00
Mode	4

### 4. The instructor maintained an environment where students felt comfortable participating.



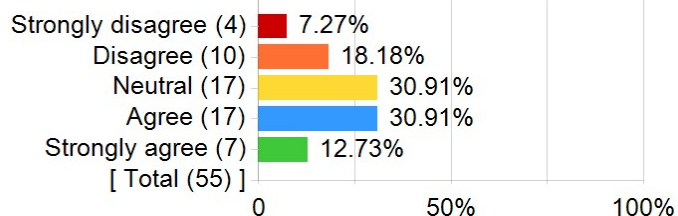
Statistics	Value
Invited Count	56
Response Count	55
Response Ratio	98.21%
Mean	2.98
Median	3.00
Mode	3

### 5. The instructor maintained an environment where students felt comfortable seeking assistance.



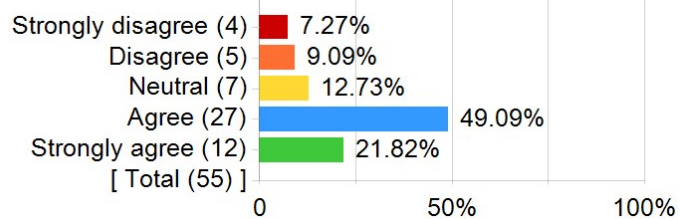
Statistics	Value
Invited Count	56
Response Count	54
Response Ratio	96.43%
Mean	3.02
Median	3.00
Mode	3

### 6. The instructor provided helpful feedback.



Statistics	Value
Invited Count	56
Response Count	55
Response Ratio	98.21%
Mean	3.24
Median	3.00
Mode	3, 4

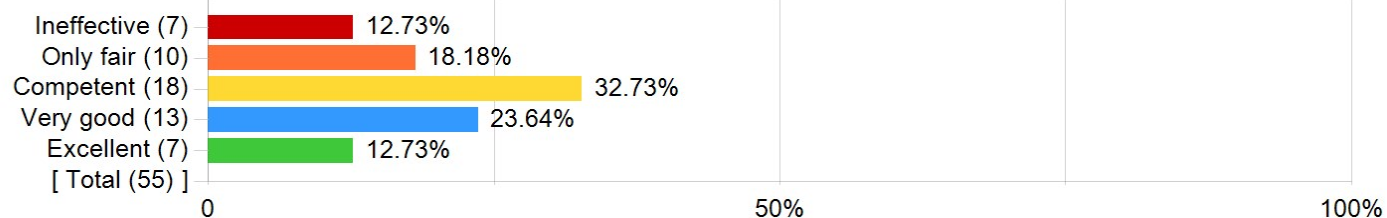
### 7. Assignments contributed to my understanding of the subject.



Statistics	Value
Invited Count	56
Response Count	55
Response Ratio	98.21%
Mean	3.69
Median	4.00
Mode	4

### Instructor's overall teaching effectiveness:

Express your judgment of the instructor's overall teaching effectiveness.



## Comments

### What did the instructor do to help you learn?

Comments
Creating new problems every week made it so I had to learn and understand the material that was being presented in order to complete homework or exams.
Homeworks were challenging but overall helped me understand the material.
Availability of office hours, organized lesson plan, relatively competent lecturing.
Office hours were helpful
Used TopHat. Easy access to lectures, and approach to solving problems.
When the teacher completed example problems on the boards rather than through tophat it helped me the most.
Created unique homework that focused on material important for projects or exams.
He gave us homework that covered the material very deeply.
Gave some meaningful homework
Keeping lectures on tophat was helpful.
Consistency of homework assignments was appreciated, as well as the exam review sessions.
went over examples in class
Posted notes online. Did examples in class
He set up very clear office hours and was extremely understanding and helpful during office hours.
Used tophat in class to help us learn. Tophat notes were confusing to look back on and didnt provide conclusive answers to questions that I would have while doing the homework/preparing for exams.
His homework assignments were very effective
He made homework that taught us how to go to office hours to get help.
How to develop problem solving strategies that could be applied to a variety of problems.
Notes were very organized. Assignments were difficult, but reinforced the material well
He gave challenging homeworks that covered all aspects of the subject to ensure the students were well versed and capable.
Professor Barry used his personal experience and knowledge of the industry in which he works to explain examples of problems presented in class. Lectures were effective, but presented extremely fast (in some cases), so following examples could be difficult when learning the material for the first time. Homework assignments stimulated learning the material but were often so difficult that it made it frustrating to learn. Even after seeking assistance from teaching assistants and tutors (who tried but were ill-equipped to answer or explain some of the questions) the difficulty and confusion persisted.
Dr. Barry tried to make the classroom more attention-grabbing by using TopHat.
The thought processes behind solving statics problems rather than just a formula to solve each problem
Available office hours to help with the unnecessarily hard homework
Posted notes online from every class
Dr. Barry taught me how to analyze static mechanical problems and apply a few basic laws and theorem sot solve those problems.
I don't pay to go to school for professors to tell me I'm a good engineer. I go to get my ass kicked. I got a 4.0 freshman year, and it's refreshing to be challenged in a new way.
Tough homework ultimately helps, but it's a steep curve
In depth example problems were very helpful.
He gave us a disappointed dad type lecture after our first exam because our performance was less than satisfactory and he just wants us to learn and be good engineers. This definitely helped me get my act together.
Also he worked out example problems in class which personally helped me learn the concepts.
Provide homework that was challenging and solutions could not be found on the internet
He showed how to do problems step by step in class and made sure we had a good conceptual understanding of concepts.
Personally demonstrated ways to solve various questions during class.
Example problems
He worked through example problems in class.
The instructor did in-class examples.

Comments
He personally helped me learn some different methods for approaching problems, but I learned most of the material that was necessary for doing well on the homework and the exams on my own. Additionally, the problems he gave out on the HWs were quite challenging and forced me to think in different ways.
Some of the homeworks were good at helping me understand the material, but some of them just seemed overkill. The in class examples were helpful as well.
Gave homeworks that made me think and learn how to do problems.
He provided us homework that pushed us to learn.
Not much.
Gave plenty of practice and encouraged to do practice outside of homework
Homework problems are challenging but for the most part fair. Lectures are interesting and being able to view the slides on your phone or computer is helpful.
He knew the material very well and explained it clearly
The physics applied to structures.
Gave assignments and taught material.
I appreciate the new material created for homework assignments and tests, to keep students honest. I also enjoyed the sometimes lighthearted interactions during class.
Proofread the homework assignments before he assigns them
Created challenging homework assignments.
Organized lectures, slides online
Presented concepts well in powerpoints.

### What could the instructor do to improve?

Comments
Introduces new terminology without explaining what it is so I get lost in lecture and I have to review my notes later to then understand what he was saying. Also I wish the review days before tests were more insightful.
More effective study material. The general lecture notes were usually almost incomprehensible, which I know is not necessarily your fault, but many times it was a struggle to complete homework referring to them even in conjunction with my own notes from the day. Another way to help augment student studying could be to post study guides –and I know that you juggle multiple classes with some hundred students to grade work for which makes creating a study guide from scratch difficult. But perhaps you could create a list of homework questions from previous semesters' classes that may be relevant to your envisioned test questions.
less jokes about going to Hem's
Use harder examples in class to prepare us for the homework.
More example problems and actually write out each aspect of the problem instead of working off premade models in tophat
Provide specific example problems either in the book or online that could supplement the homework and further our understanding of the material.
Be more specific on requirements for the design project.
Fewer homework questions of the same caliber would wrk just as well
Make office hours for him and TAs better. They always are packed with people and its impossible to actually get help with so many people there.
<ol style="list-style-type: none"> <li>1. stop asking for class participation in a class of over 50 students, no one is going to shout an answer at the stage in an auditorium setup.</li> <li>2. this class does not need to be remotely as difficult as you make it. You teach the class as if everyone in it is a mechanical engineer or even planning on doing any kind of design in their careers, but in reality nearly every engineering major is required to take this course (including IE and BIOE) and most of them are not going to continue with this material. They don't need to be able to solve trusses that look like a factorial tree or cranes lifting other cranes, they need to understand the fundamental principles of statics and they gain nothing from deliberately complicating exams and homework.</li> <li>3. Far too much homework, and on top of the design project no less. This class is not important enough to people who are not mechanical or structural engineers to warrant that amount of time.</li> </ol>
Post lecture slides the day before so they can be printed.
Less time consuming HWs
There are only two things I would say to improve upon. The first is pretty obvious and that's that Top Hat isn't that good, but you

Comments
already know about that. Maybe finding a different way of conveying the notes would be beneficial. The second thing would be going over more difficult problems in class that would be more representative of the homework.
Better in class slides (more explanation/define variables). Make the homework less difficult so that it doesn't take going to office hours every week and toiling for hours over it to complete. The homework would only serve to confuse me more than answer any questions I had about the material in most cases. Use a different textbook that provides better explanations and examples.
Organized handwriting
Sometimes in class the examples picked were not the best and not always explained in the best way.
Make homework assignments that reinforce the concepts that are going to be on the exam. It would be helpful if feedback on homework was given faster so that errors made can be relearned correctly before it's too late.
In class examples could be more complex to facilitate in the completion of the homework assignments.
The challenging homeworks were useful for learning but grading them easier would be nice since only 1/3 of the homework is graded and it is extremely easy to lose points.
The text book suggested / recommended from the syllabus offered plenty of practice problems, however, solutions are only available for those who purchase Chegg, which is not always reliable / peer reviewed. Even then, only some of the final answers are available at the end of the text. I would suggest after each lecture, the professor indicate what problems you SHOULD be able to solve to show mastery of the material. This might be obvious to the professor, but not a student learning engineering statics for the first time. Problems are arranged as: intro, intermediate, and challenging. Suggest a few to try after lecture and possibly have the solutions worked out so that students can attempt, not for grading or collection, but merely for personal enrichment.
Dr. Barry needs to seem more approachable. He constantly complained about his previous years wherein the students were just so terrible. He also made it seem like his Office Hours were a gift to humanity, and if we didn't know exactly what was wrong, we were wasting his time.
Having answers for the homework problems while doing them would be helpful because most of the time I have no idea whether or not I am doing a problem correctly until a week after I turn in the homework when the answers are released. By that point I don't remember my thought process while doing the homework
Ease back on the difficulty of the tests
Speak slower
I think that Dr. Barry is generally an alright professor. However, I think there were many times where he moved through material very quickly. There also were many times where the lecture material did not line up with the level of difficulty in the out of class problems and homework. I think because his lessons were so quick, I felt like I had learned the material and thought I was applying the principles of the lesson correctly to the homework, only to have it be graded and be very wrong. I think if he took more time to explain the material in greater depth I would have had a better understanding of statics. There also were times during lecture where it seemed like Dr. Barry assumed the class's knowledge. He would teach us like the concept was so simple that he shouldn't have to explain it to us, and that meant that I lost a lot of the theory behind a particular concept and struggled more with filling in the gaps at office hours or TA tutoring. Also if he spent less time making jokes about how he hates his job and his students being an inconvenience to him and spent more time teaching the material, that would be an improvement.
I felt that rushing through the curriculum, in order to end the semester early and not have class during the week prior to finals week was a huge disservice to the students. Losing this week worth of class meant that it was not possible to work through adequate example problems in class throughout the semester.
I also felt that the design project was incredibly poorly organized and implemented.
Stop trying so hard to convince people you don't care.
Be more receptive to questions during class time.
During a tutoring session, I heard that Dr. Barry takes problems from another book that isn't the textbook that we bought. If he would've mentioned that there was another book out there that he used, I think this would've been helpful as another source to use for practice problems. I'm not sure if this is true or not. Also, providing practice extra would be nice practice as well since sometimes it can be difficult to pin-point problems in the book that would be similar to ones seen on an exam.
Not belittle people who ask questions that he thinks are stupid
Instead of doing really complicated, long problems as examples in class, start with simple problems then go to the more difficult ones.
N/A
More example problems/more complicated example problems
I believe that Dr. Barry should try to incorporate more difficult practice problems into his power points. I also think that he should take a small time in class to ask if there are any general questions about the homework.



Comments
The instructor could be slightly less cynical.
TopHat is just not a great interface, and I personally would find class notes much more useful if it was written on a PDF and then posted to Course Web after class. Currently, it is very difficult to read the notes during class while we are talking and working through problems, and nearly impossible to decipher the notes after class when reviewing them.
More friendly presentation and interactions with students.
Posting previous years' exams for practice could also be helpful. It would also be nice to have the right sections of the textbook that correspond to what we're doing in class but I might just have a different edition of the book. More timely updates on the schedule would be nice, ie, it would have been nice to know that HW 10 was just moved to a different week in the semester before the week it was due. Make the homeworks either shorter or less time consuming.
Maybe not act like it constantly inconveniences him to teach the class.
I think he could provide more accurate and consistent resources. Sometimes, his answer keys did not align with what TAs clarified in office hours, which just made me more confused about the concepts. It would definitely be good to provide definitive answer keys to questions that do not bring so much confusion. I actively tried to make use of the office hours, and I found that attending office hours seemed to be more confusing sometimes.
Dr. Barry made it very clear that he did not want to teach this course. The only thing that made the course worthwhile to him was making his students feel stupid, giving them failing grades after gallivanting in Ireland for a month or wherever he was. Only returning to give us an extremely difficult exam, 40% average, refusing to curve it more than 3 points. Then lecturing us about how we need to be trying harder. This man is a ridiculous hypocrite. If you despise teaching this much then just quit.
give less homework, so students would feel comfortable with the time they have to work on practice problems and not just homework the whole time
The grading of the homework is far too harsh, taking 11% off a homework for a single missed + or – sign is absurd. If you are going on a trip, tell your students. It's ridiculous to just leave without an explanation for three weeks to reappear on exam day. Doing more example problems would also be beneficial.
Not leave for two weeks right before an exam!
Have enthusiasm.
There could sometimes be a perceived hostility or indifference toward students.
Post correct solutions to the homework
Have more in depth explanation of topics.
Way easier grading, less homework with more diverse applications, easier tests with more diverse applications, have tests with more than 3 questions (maybe some multiple choice)
Barry is very inaccessible. He has two office hours per week, but if you want to meet with him, you will have to either skip class or camp out for at least an hour. His homeworks take at least 9 hours a week, and the submission process leads to loss of points for non-content-related errors like poor scan quality. Barry left the class with a substitute teacher for two weeks, just to come back on the day of our midterm. Barry cancels class when he feels like it. Barry does not respond to emails in a timely fashion, and when he replies, his messages are very passive-aggressive. Barry's in-class examples are usually too complicated for students to actually grasp the concept the problem embodies. Barry's tests are unfair in relation to the amount of support and feedback he provides.

### Do you have any other information that you would like your instructor to know?

Comments
Me and a bunch of other students often get lost during lecture.
I really did appreciate your speech after our midterm. Did I agree with all points? No. But the general essence of the points you wanted to get across really stuck with me. The biggest issue I took up with was your talk about students only in it for the grade. And while I personally agree with you, systematically, students are more inclined to want grades. Other than internships, co-ops, and research, grades are the only thing keeping some kids in school as scholarships and other financial aid revolve around our grades. I don't mean to say this point of "grade our assignments easier because I need to keep my scholarship" it's more just to say that a lot of us have familial, monetary, and personal problems that impact that grade-hungry attitude. I would love to sit in class and take each semester as a new opportunity to learn new things, but really it ends up being a game of numbers and dates calculating whether I'll come back next year at all. In all, I really did enjoy your class, I learned a lot in what I believe was an effective manner.
Very nice in office hours, but other students are intimidated to meet you one on one.
I enjoy the material of the class I just struggle to put the time in to learn everything while balancing all other classes. Please keep the fact that students are in many classes in mind. It does make it difficult for students to complete long complicated homework without solely focusing on the grades.
None



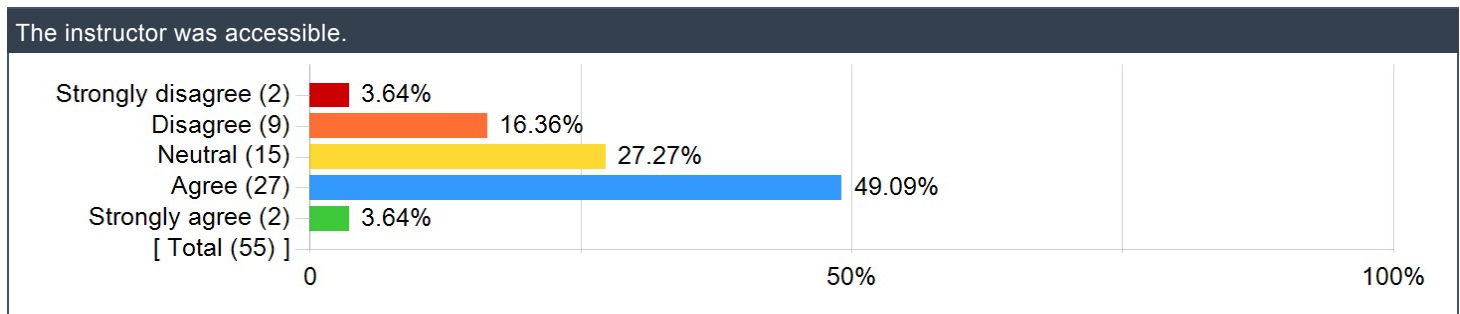
Comments
No.
No
Funny guy, but comes off very rude and like he doesn't care.
Openly admitting to receiving feedback about your course and then ignoring it is unacceptable behavior. Your students have a different perspective on your course and what they need from it, and claiming that your course is too easy despite direct feedback saying that it isn't says something about the attitude you bring to this course.
Also, forcing students to sign the syllabus (making it a written agreement) and then making deliberate and malicious changes to the policies it contained shows a lack of integrity that adults should not accept. Unfortunately we as college students don't have the kind of power it takes to enforce this most basic rule of human interaction (that you follow through on things you agree to).
No
Honestly, although there were many times through the year where I was extremely frustrated with the homework. It did force me to learn the material, and found it was extremely effective. The TA's were very helpful, and once I figured out how to approach doing the homework for the class, it became a very good way for me to learn.
I wasn't sure how to prepare for exams and felt an overall lack of organization for this whole class
I respectfully hated this class
–
practice tests and other additional study materials would be super helpful
Please grade the homework differently, maybe half points for completion. It was very hard to get a good grade and discouraged students from doing the homework all together.
Dr. Barry was enthusiastic, knowledgeable, funny, and even sarcastic – despite the academic rigor it was an enjoyable semester.
Dr. Barry clearly really cares about statics and teaching, but the narrative he preaches to make him seem more hardened and distant makes learning from him difficult.
don't make the class so hard.
I really like having Dr. Barry as a professor. I did enjoy that his class was challenging, but I think that he should have done more to teach his students in a way that they could better apply his instruction to the out of class material and homework.
Some people do appreciate you paving your way through the problematic MEMS dept.
Also Arsha was an absolutely awesome TA.
Shadow needs his own office hours.
Shadow is a cute dog. I would greatly enjoy it if you brought him to class one time, particularly on a day when you hand back exams so that when I am inevitably sad after seeing my grade, I can at least look at a cute dog.
Also, the plentiful amount of TA office hours was super nice.
Barry made every class worth coming to thanks entirely to his personality
n/a
I think that you should not do a weekly quiz but maybe a biweekly quiz that could be graded like a test with feedback. The top hat quizzes being all or nothing was kind of frustrating.
The instructor does well to bring up practical application of the material to industry work and practices.
Sometimes I found the HW problems to be needlessly tedious, and when there were problems that were similar in nature with small twists, I often found it difficult to motivate myself to do those with the same effort that I had put in for the other similar questions. Additionally, leaving unannounced for more than two weeks right before our exam left many students in a tough position.
I'm not the biggest fan of your persona in lecture but I know that's intentional so you do you.
The smurf jokes weren't funny. And the AA bit was good only the first time.
While there was some unclear answers to homeworks throughout the semester, I truly feel like I was pushed past my comfort zone, which did help me learn the material more. I just think it would be good to find a way to give TA the needed information to ensure that they are going over problems with us correctly so we can make sure that we are learning material in the right manner.
Your arrogance is dumbfounding. The fact that you think your class is so important that it merits spending 8 hours just on homework, and even more practicing problems in the textbook. Most people taking this course have 15 credits worth of other classes to worry about. Also, laughing at students failing exams, crying during an exam, or just struggling in general is absurd. I wouldn't be surprised if a student killed themselves and put your name on the suicide note. I've considered emailing you my therapy bill multiple times. This class put me on antidepressants.
don't put the blame on all of us for doing bad, makes us feel really shitty when you say you expected us to have a higher average then we don't get that, it's not only our fault.

Comments
Professor Barry, I understand your desire to not make your class an "easy A", and I respect that you want us to become good engineers. Unfortunately you have an attitude problem that doesn't make up for it. Don't come to class every day and complain about your job. If you don't want to teach, then don't. I'm sure you could find a job in industry.
Nope
The material wasn't difficult to grasp with your techniques.
No
Had a great semester but did not enjoy the course. Grading was very rough, I did not feel like I had any categories from the syllabus to help my grade. Teacher was not very enthusiastic about teaching which made it discouraging to learn.
Everything above plus: Statics is not the only class we are taking. Statics is a three credit hour, introductory course to mechanical engineering topics and should not be a class that consumes nearly every spare moment of the week.

## ENGINEERING

### Swanson School of Engineering Items

The instructor was accessible.



Please provide advice to future students: What could you have done to improve your learning in this course?

Comments
Do more book problems and focus on homework solutions. A lot of the material on the exams comes from these two things so if you're able to do most to said material you should do fairly well on exams.
Do as many book problems as you can and maybe you'll get a C
Don't be scared of the TA's and Barry to ask for help. Barry's generally pessimistic attitude may be off-putting at first, but in reality they aren't all that bad most of the time.
Go to office hours alot
Read the textbook, Go to TA's and office hours.
Use the book everyday.
None.
Read the book.
Dedicate your entire life to statics
Read the book a lot. Do a lot of practice homework. Start homeworks and studying for the quiz early in the week because it is very time consuming.
I could have practiced better time management on exams (not spending too much time on the first problem, etc.)
Start homework earlier
Read the book more
Start off in the beginning by going to office hours. I'd say this is the first class where I really had to go to office hours to do the homework. It took me failing one of the homework assignments to realize what I needed to do.
I would have done book problems more often. I would have gone to office hours more than I did.
Make sure to do all of the homework and don't get answers from online. Go to office hours if you need help on it
Do the homework to the best of your ability and do not procrastinate
Review material immediately after lecture, start homework assignments as early as possible
Start the homeworks early and seek help. The homeworks are difficult but if you understand them, the exams are manageable.
The professor did have office hours, but for the number of students in each class, and the number of courses the professor teaches, 2 hours a week is not accessible for that many students. However, I am not directly blaming the professor, this is likely an administrative / department decision. If you have questions, make sure you get in line early when possible.
If a two-week break is being taken, all we ask is for a warning, or in case of emergency a brief apology or explanation. I would've appreciated kinder words, but understand this is a matter of personal difference.
Office hours were helpful
Put TONS of time into studying and doing the homework
Read textbook every day

Comments
Go to office hours with questions. Bother Dr. Barry non-stop, because he can explain the information in this class really well if you make him.
Go to office hours if you need help. Otherwise, get a homework partner
Take the textbook seriously.
Read the book and actually do practice problems. There are too many times when I was having trouble on the homework, went to the book, and immediately found an example that helped me understand the concept.
Go to office hours
Start the homework early so you have more time to go to office hours.
Make clear notes during class
Go to more office hours, do harder practice problems
Just study. You get taught a lot of different topics, however, your grades may not show what you know.
Engage with material as much as possible. This means not only applying oneself in class, but reading the textbook before class to help solidify conceptual knowledge and practicing problems often to apply this conceptual knowledge.
I could have taken better advantage of Dr. Barry's office hours earlier in the semester, because, by the time that I did go, either he was gone on a trip somewhere or the wait times were long.
Go to office hours, do textbook problems!!!
Do all of the homeworks on your own. Don't look them up or copy off people.
Be an active learner, look into book problems, attend office hours
Don't take this class. I wouldn't wish the pain I've endured this semester on anyone.
do as many practice problems as possible, start hw early
Read the book and do all of the problems. To do well in Barry's class you have to grind. Also YouTube tutorials are helpful. Good luck.
Put in the work. It sneaks up on you and you can easily underestimate it
None
There's no hope. You're failing this mofo
Make sure to allow plenty of time for homework. Don't be discouraged by exam grades; everyone is in it together.
Go to office hours for homework help
Read from the book and visit office hours.
Pay strong attention to the homework, read the textbook, transfer to the night class
Book problems every waking moment.

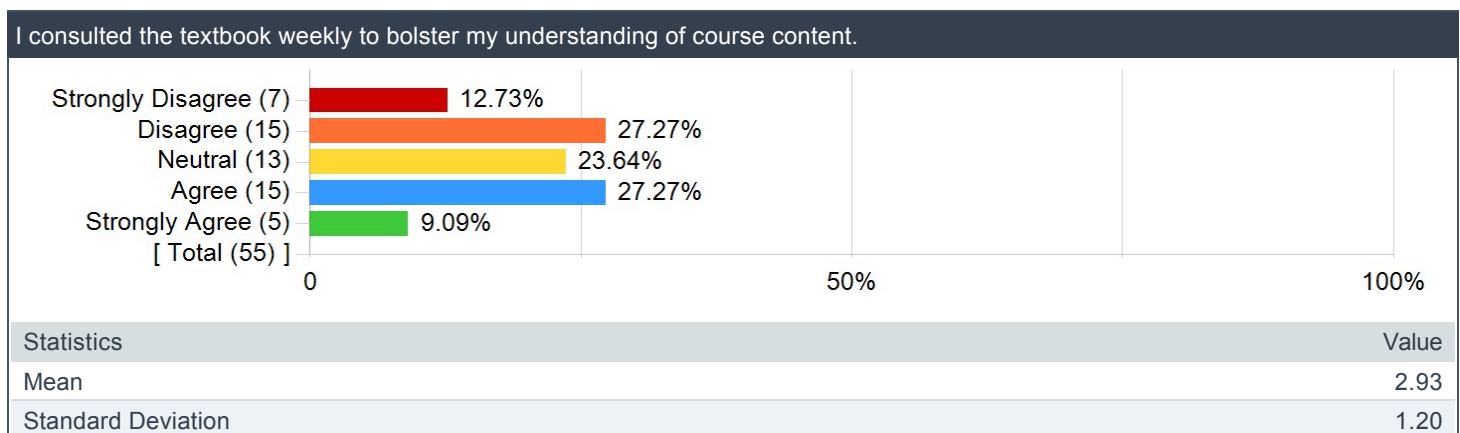
## ENGINEERING UNDERGRAD

Please rate the degree to which this course has improved...

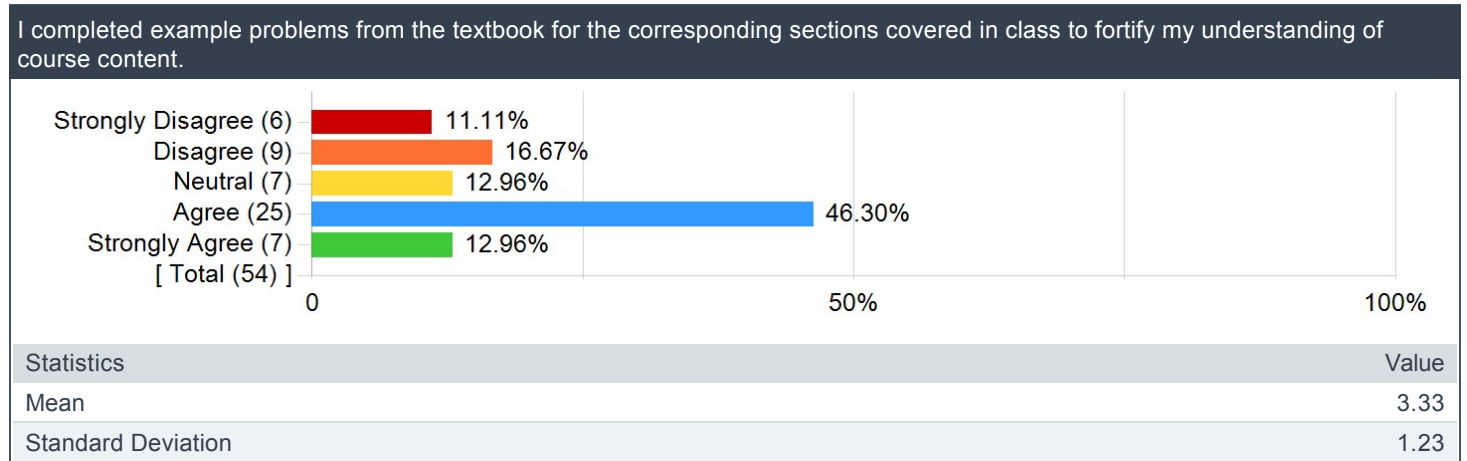
Question	Results		
	Response Count	Mean	Standard Deviation
Your ability to identify, formulate, and solve complex engineering problems by applying principles of engineering.	55	3.62	0.83
Your ability to identify, formulate, and solve complex engineering problems by applying principles of science.	55	3.40	0.93
Your ability to identify, formulate, and solve complex engineering problems by applying principles of mathematics.	55	3.53	0.90
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare.	55	2.65	1.08
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of global, cultural, and social factors (i.e., sustainability principles).	55	2.35	1.11
Your ability to apply engineering design to produce solutions that meet specified needs with consideration of environmental and economic factors (i.e., sustainability principles).	54	2.41	1.11
Your ability to effectively communicate verbally with a wide range of audiences.	55	2.35	1.11
Your ability to effectively communicate in writing to a wide range of audiences.	55	2.36	1.11
Your ability to recognize ethical and professional responsibilities in engineering situations.	55	2.84	1.24
Your ability to make informed judgments that consider the impact of engineering solutions in global and societal contexts (i.e., sustainability principles).	55	2.47	1.20
Your ability to make informed judgments that consider the impact of engineering solutions in economic and environmental contexts (i.e., sustainability principles).	55	2.44	1.23
Your ability to function effectively on a team whose members together provide an inclusive environment, collaboration, and leadership.	54	3.26	1.05
Your ability to function effectively on a team whose members together establish goals, plan tasks, and meet objectives.	55	3.27	1.04
Your ability to develop appropriate experiments.	55	2.78	1.21
Your ability to conduct appropriate experiments.	55	2.71	1.18
Your ability to analyze and interpret data and use engineering judgment to draw conclusions.	55	3.29	1.03
Your ability to embrace new learning strategies to independently acquire and apply new knowledge to solve engineering problems.	55	3.42	1.07

## Personalized Questions

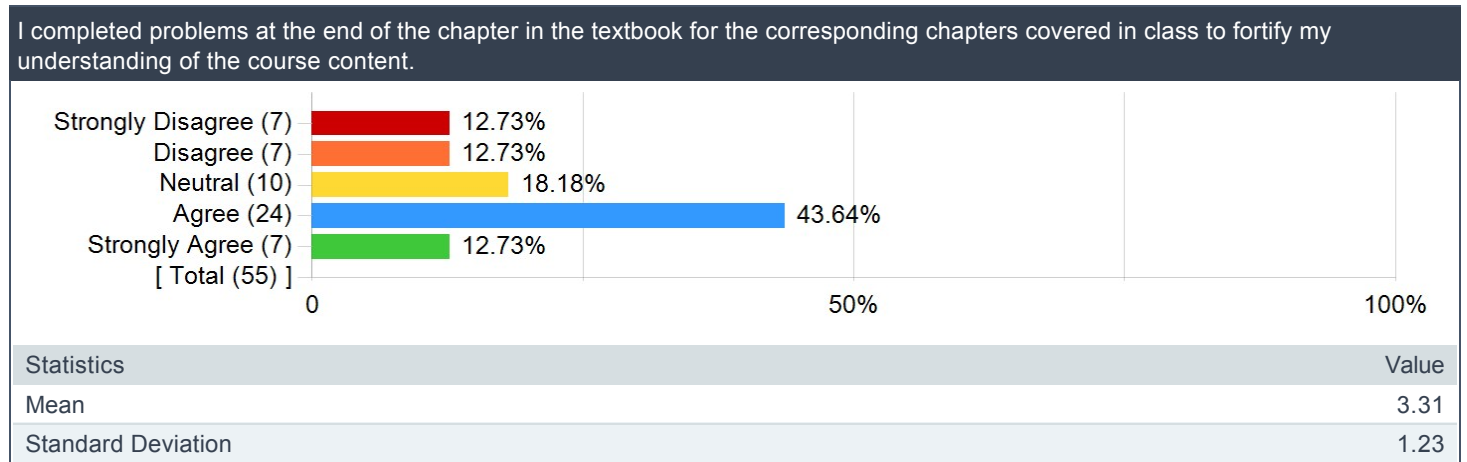
I consulted the textbook weekly to bolster my understanding of course content.



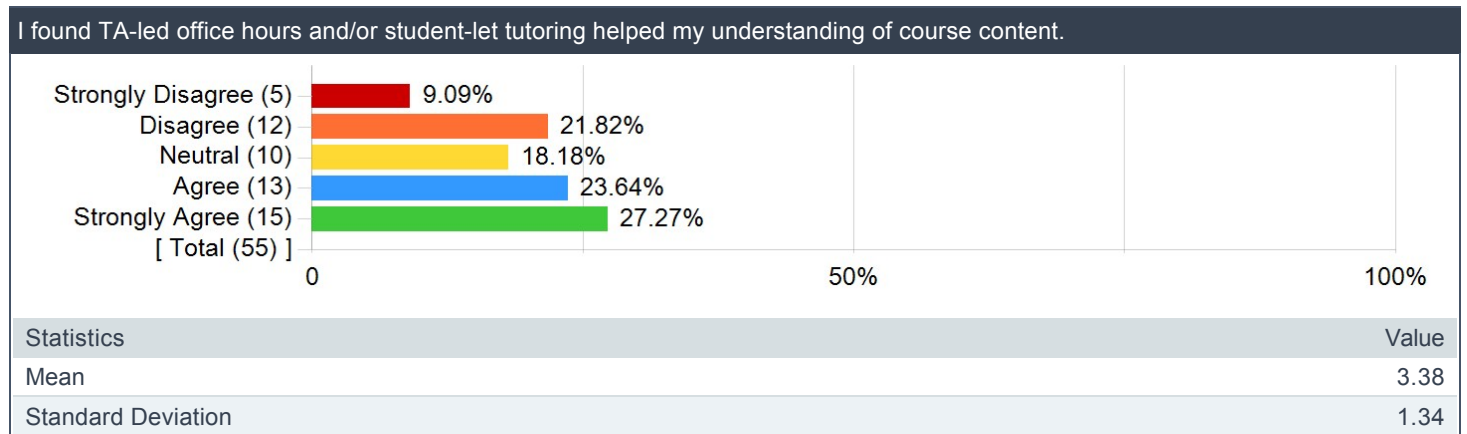
**I completed example problems from the textbook for the corresponding sections covered in class to fortify my understanding of course content.**



**I completed problems at the end of the chapter in the textbook for the corresponding chapters covered in class to fortify my understanding of the course content.**

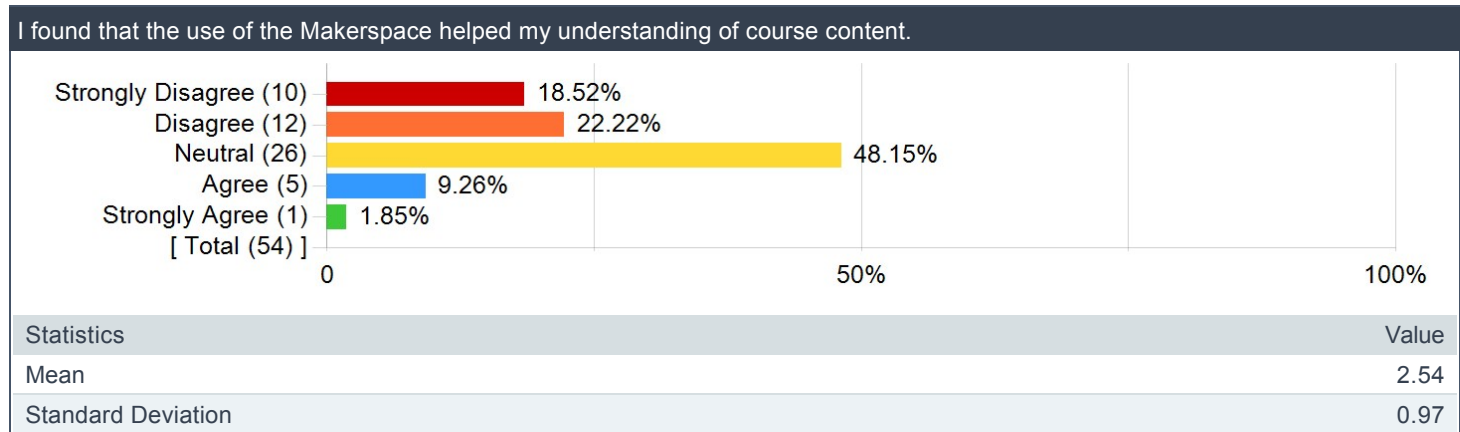


**I found TA-led office hours and/or student-led tutoring helped my understanding of course content.**

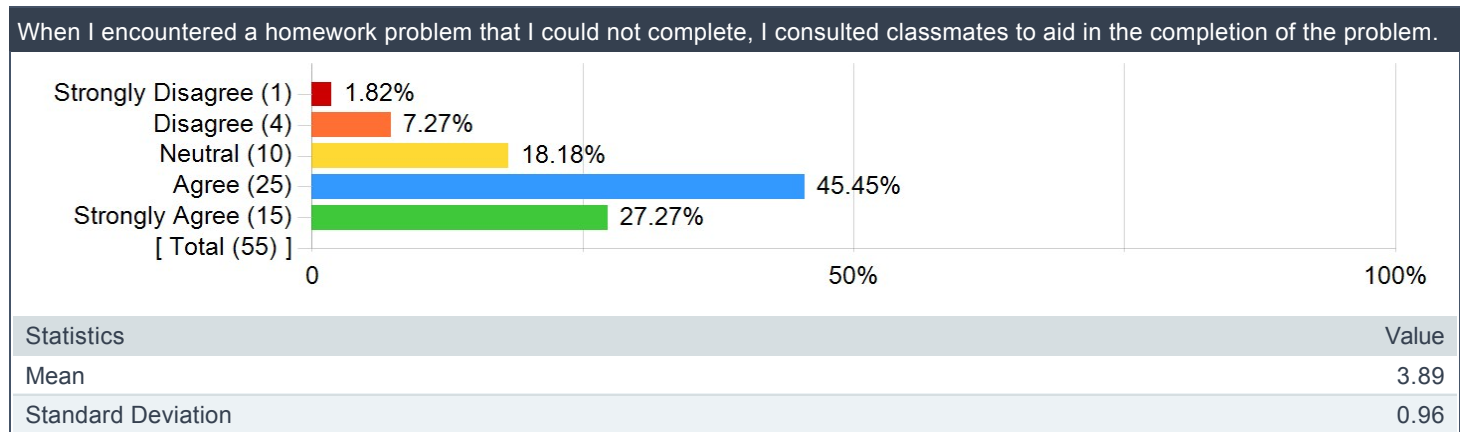




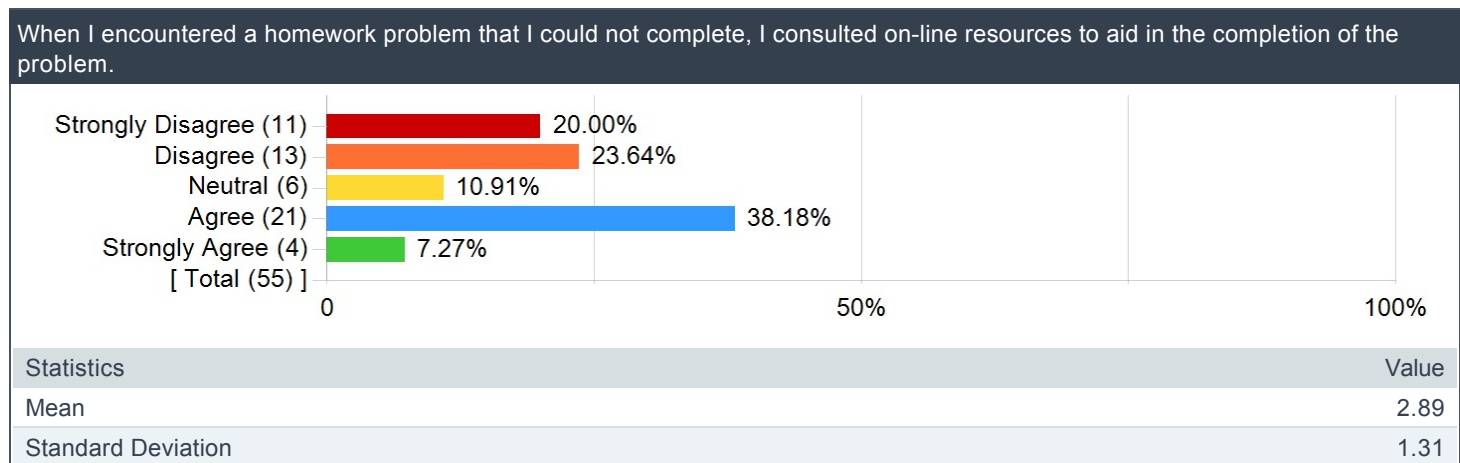
### I found that the use of the Makerspace helped my understanding of course content.



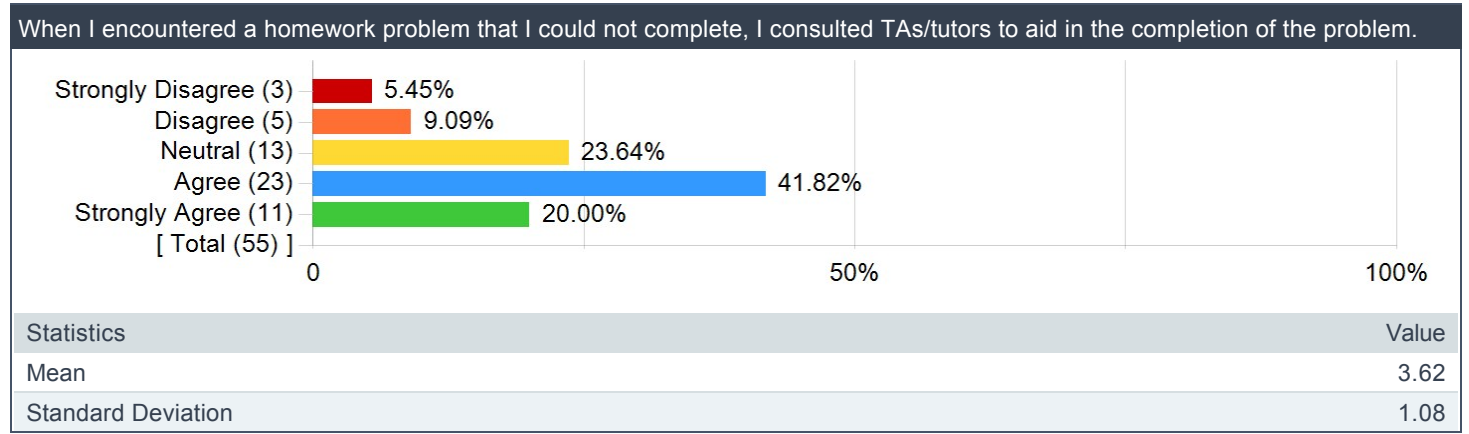
### When I encountered a homework problem that I could not complete, I consulted classmates to aid in the completion of the problem.



### When I encountered a homework problem that I could not complete, I consulted on-line resources to aid in the completion of the problem.



**When I encountered a homework problem that I could not complete, I consulted TAs/tutors to aid in the completion of the problem.**



On average, how many hours per week did you devote to this course, outside of class instruction?

Comments
8
12 Hours
~5–6 hours of pure uninterrupted work. ~2–3 hours of researching concepts/looking for review questions/watching relevant videos
6
10
12
8
9–10.
Most
10–15 hours a week
8
8
Anywhere from 10–20+ hours, not even an lying
at least 10
10
10–12
10
6
7
4
12
6
6
6 or 7
7
Approximately 12–18
7
5
5
7
8–10
8
6
20
9
15
15
Approximately 10–15
3
10
About 3–6 hours
6
10
12
10

Comments
4–5
too many probably 15 hours
40 hours a week on the homeworks
4–5
10
3
10
10–12 hours per week

**On average, how many hours per week did you seek assistance through TA-led office hours and/or student-led tutoring?**

Comments
2
1 Hour
N/A
1
3.5–4
1
1
1–2.
0
Very little. TA office hours, especially on Wednesday and thursday were filled to the brim with people and were impossible to get actual help due to the overwhelming amount of people
2
5
3 hours on average
1
2
2–5
1
1–2
1
1
2
>1
none. The TAs were useless
3
2
2
0.5
.5
N/a
0
1–3
1
0.5

Comments
10
<1
1.5
1
Approximately 1–2
.5
1
maybe .1 hours
1.5
3
.5
2
0
1 hour
2
1–2
1
1
0
1–3