College of Engineering, Cornell University
Course Evaluation Response Summary
Semester: Fall 2010   Course Owner   MAE
Course: ENGRD 2020 Lec 2   CID: 9787
Instructor: Ruina
88 Responses, 123 Enrolled, 71.54% Response

Question	Mean	Count	1	2	3	4	5
1. How valuable were the assigned readings? 1=taught me little; 5=extremely educational	3.35	72	4	9	28	20	11
2. How valuable were the homework and/or computer assignments? 1=taught me little; 5=extremely educational	4.43	83	0	3	8	22	50
3. How valuable were the laboratories? 1=taught me little; 5=extremely educational	3.01	81	6	21	26	22	6
4. Rate the examinations in this course as a test of your knowledge. 1=too easy, not adequate; 3=adequate; 5=too difficult, not a fair test	3.51	83	1	6	40	22	14
5. Did the lecturer stimulate your interest in the subject? 1=not at all; 5=stimulated great interest, inspired independent effort	3.82	83	5	8	17	20	33
6. Was the lecture presentation organized and clear? 1=disorganized and unclear; 5=very organized and lucid	3.85	84	3	9	17	24	31
7. Was the lecturer willing and able to help you overcome difficulties? 1=was of no help; 5=was very helpful	3.81	77	5	7	18	15	32
8. Rate the overall teaching effectiveness of your lecturer compared to others at Cornell. 1=worse than average; 5=much better than average	3.75	84	7	6	21	17	33
9. Was the recitation organized and clear? 1=not at all; 5=very organized, lucid	3.92	83	2	3	23	27	28
10. Was the recitation instructor willing and available to help you overcome difficulties? 1=was of no help; 5=was very helpful	4.33	81	0	0	15	24	42
11. How would you rate the recitation instructor's command of the course material? 1=poor command of material; 5=excellent command of material	4.46	83	1	1	8	22	51
12. What was the overall quality of the recitations and your recitation instructor? 1=worse than average; 5=much better than average	4.15	82	1	2	14	32	33
13. Overall, how does course compare with other technical courses you've taken at Cornell? 1=poorly, not educational; 5=excellently, extremely educational	4.04	82	2	4	17	25	34
14. How many hours each week did you spend on this course outside of class/lab/recitation? 1=less than 2; 2=(2-4); 3=(5-8); 4=(9-15); 5=16 or more	3.42	83	2	2	46	25	8
15. How prepared were you for this course? 1=overprepared, it repeated material; 5=underprepared, course assumed unfamiliar knowledge	3.20	82	0	8	57	10	7
16. Was the code of academic integrity maintained in this course? 1=no, often violated; 5=yes, well maintained	4.50	82	0	1	9	20	52
17. Most important reason for taking this course? 1=field or major requires it; 2=prerequisite for further courses of interest; 3=interest in subject matter; 4=reputation of the course; 5=reputation of the instructor	--	83	63	8	7	0	5

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The instructor provided these special instructions:

Extra Queston #1:

At the end of the academic year, faculty may nominate outstanding Ph.D. candidates who served as teaching assistants. The Bolgiano Outstanding Teaching Award is presented at the MAE Commencement Ceremony in May. If you have interacted with any of the following TA's you may provide supporting comments: Betsy Ellis; Chao Fang; Scott Grutzik or Kirk Samaroo.

Extra Queston #2:

Please comment on the Beer and Johnston Mechanics of Materials text.
(Useful? Strengths? Weaknesses?)

Extra Queston #3:

Please comment on the Ruina and Pratap Statics text.
(Useful? Strengths? Weaknesses?)

Extra Queston #4:

Please comment on the use of i-clickers in this course.
(Useful? Strengths? Weaknesses?)

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1. Please comment on the strengths of any aspect of this course (e.g., the lecture, recitation, laboratory, computing, text, homeworks, examinations or course content).

57550: homeworks/exams

57822: Professor Ruina is an amazing individual!
He demonstrates to students by vandalizing school rulers and class materials. He even broke a ruler in front of us. It was amazing! Everyone wanted him to do it again.

He even broke a club's poster to demonstrate. He made me want to be a mechi!

57875: For the most part, tests were fair difficulty level

57963: Textbook used for second half of the course, by Beer and Johnston, was very useful. Explained everything clearly.

58293: Scott was an excellent TA. Always very helpful and really knew the material.

58333: I liked the homework rules -- they were reasonable and fair.

Allowing exam corrections is a good way to get us to learn but still be graded fairly in a way that rewarded those who performed well originally.

58376: The lecturer explains things very well. He takes the time to explain step by step. He gives good examples that are good to build upon. The drawings on the board are good. He tries to reason things, makes bullet point lists when necessary and emphasizes what is important.

The recitation instructor also gives good examples that are helpful for the homeworks. He goes over the material covered in lecture in a more simple and comprehensible manner.

The examinations were fair - even though since there were only 3 questions in each it was difficult for the student to show how much he had learned. Furthermore, having only 3 problems makes each problem worth more points and each blunder affects the student more.

The grading for the problems was harsh. Sometimes, many points were taken off for small things. I understand points should be taken off for not putting arrows above vector values, but I think taking off 5 points is exaggerating. I think that instead of taking off points, the grading should work by adding points that the student has done right. Taking off 13 points for treating a non-2 force member as a 2 force member is too much - the student has done other important things right: drawing the various FBDs correctly, the moment and force equations to find the reaction forces, the idea that the moment should be take about one point and not another to find the final force we are looking for, etc.

58407: The homeworks and recitations were crucial to helping me understand the material.

58819: I think this course is one of the most difficult courses in engineering that is required by my major. I was afraid to take it in the beginning, but when I actually took it I really liked the course. The course material is what most engineers should know and I think it is educational. Homework problems were good representation of prelim questions. Some homework problems were over challenging, however, most problems were decent. The exams tend to be difficult, but I LOVED the fact that the professor gave us more time during each prelim.

58897: homeworks were challenging, yet fun

58919: Ruina's lecture is very good, he gets right to the relevant material and shows us how to use it. Perfect.

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58948: Homework assignments were educational.

59515: homeworks useful, lecture worth going to, professor/TAs were very accesable

59677: great teacher great TA!

59689: The lectures were very clear. Video recording was very helpful.

59743: recitation broke down problems and made them easier to understand than lecture

59919: The homeworks were extremely helpful

59973: Lecture was a lot of fun
homeworks are informative

60398: Recitation and homeworks were helpful, so were VideoNotes online.

60415: Very applicable.

60474: good

60487: The material is very important for many engineering applications. The second textbook we used also had a lot of clear examples to help with homework.

60544: the lecture was very informative and the homeworks were extremely useful

60809: great lecture, I am an OR major, but wanted to take this course. And I don't regret it.

60874: i liked that we had a lot of chances to ask quesitons.

61030: I liked that you didn't have to do all the problems in the problem set; rather, you could work on and get credit for doing old material if that's what you needed to catch up on.

61208: I think that the homework sets enabled me to keep up to date with the course work, and prepared me adequately for the exams.

61597: I liked the Ruina Pratap statics textbooks. The homeworks problems in the textbook challenging and helpful. However,I wished the HW solutions were posted earlier, instead of right before the exams. It would also be better if the TA's wrote the solutions.

61675: Professor Ruina uses a different lecture style from other professors I've had thus far at Cornell. He puts a lot of effort into making students feel comfortable about asking questions and uses the iClicker as an anonymous way of tracking the class's progress/understanding. Normally lectures are straight-forward and rather dry, but I found 2020 to be stimulating and interesting throughout the majority of the semester.

61692: Ruina's policies on getting credit for spending time working on homework, rather than just turning in the problems without understanding it really helped me. Additionally, offering things like the homework exam were great things to help students like myself who struggled with the course material feel like there is a chance to recognize that I have learned something.

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61756: i appreciated the recitations and continuous office hours on tuesday and weds

61761: Most of learning occured while doing homework assignments. Recorded lectures were convenient for review.

62033: The lectures were very quick and helpful, covering a lot of material. Laboratory helped the physical understanding of the concepts we've learned. Homeworks are very helpful.

62299: Ruina is exceptional at giving the students his intuition on how to look at problems and see intricacies that you normally wouldn't see. His lecture was extremely helpful and engaging.

62370: Andy Ruina was more concerned with the students learning the material well than with how well they did on assignments. The six hour rule on homework encouraged me to take my time and understand it instead of just blindly plug numbers into formulas. The prelims were mostly fair, with the exception noted below. The recitation was very useful. The demonstrations in class were helpful.

62543: The lecture was phenomenal and really demonstrated Ruina's goal to make us think like Engineers.

62720: The recitation was very helpful for reinforcing the course material learned in lecture and was essential to understanding how to do the homework. Labs were a good length and provided practical applications of the course material. Homeworks were useful to prepare for exams and the exams were challenging but fair. The texts were very useful in the comprehension of course material as well.

62789: The Beer and Johnston book was really helpful. The recitation and the video notes were really helpful.

62893: Recitation instructor was very helpful in that he showed passion for the subject matter and taught us different methods of solving a problem from the methods demonstrated in class

62998: It did actually help me view objects and picture a free body diagram of the forces at work. I learned a lot, and I know that this will come in useful later.

63073: Expectations on Matlab knowledge should be stated before allotted substantial weight towards the final grade.

63228: Excellent

63293: The professor had a well-taught lecture and didn't assume previous knowledge from anyone. Very open to questions and very open to what might be considered "dumb" questions. Gave a pretty interesting lecture as well.

63454: The labs were very helpful, I lucked out with a great TA so the recitations also were helpful. Once you get used to Ruina's somewhat unorthodox demeanor and teaching style his lectures proved to be some of the best I have been a part of thus far at Cornell. Exams were fair, the first one was very lengthy, but again, once you master his tests and develop your "statics skill set," everything about this class was excellent.

63542: Ruina and Samaroo were the best combination of teachers I have had at Cornell. Ruina care more about the quality of his instruction that any other teacher I have had and it showed in his lecture.

63573: The recitation was educational when going over example problems and posting solutions to homework and exam problems were very helpful.

63579: Ruina's teaching is some of the best at Cornell. The homeworks were difficult and took a long time to do, but helped me understand the concepts in the course.

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64058: Lecture was good at teaching the material.

64246: The video lectures were extremely helpful so that I could always go back to any lectures to relearn or clarify materials.

The quizzes at the beginning of the classes were helpful in providing a quick review of previous materials.

64338: The lectures were great. I always enjoyed going to them and always learned something new. The lectures provided insight that a book can not give. Also, Kirk did a great job s=during section really focusing on the problems we had individually. Section was fun and something I also looked forward to.

64385: The recitation in the course helped me to understand the course material. I felt as if i learned most of the material from recitation and from doing homework.

64442: recitation was really helpful

64450: Lecture and homework combined were very effective in getting me to understand the course material. Homework was challenging, yet doable, and reinforced the concepts I needed to know.

64560: The lecture best explained the concepts to us, and also how to walk through the reasoning process of statically indeterminate problems. The homework is definitely the best preparation for the exams.

64599: Homeworks covered all the course information very well, and using the office hours to complete the homework helped me to better understand the material.

64612: TA was wonderful, very knowledgeable and personable.

64620: Scott was a great TA and his discussion section really helped me understand the material. In additions i found the labs very practical.

64971: The homework was very helpful in learning the material.

64975: The lecture was very good. Prof. Ruina is probably the best teacher I've had yet at Cornell. He is also very helpful in office hours and more than willing to explain stuff outside of class. The structure of the lecture was very educational and it was also really nice to have the online lectures to go back and review or to watch if we couldn't make it to class on a certain day.
The homeworks were a good length.
The tests were a good level of difficulty, but they covered the statics essentials, instead of the odd stuff like test in other classes sometimes do.

64984: Amazing, interesting lectures.

65783: good lectures

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2. Please comment on the weaknesses of any aspect of this course (e.g., the lecture, recitation, laboratory, computing, text, homeworks, examinations or course content).

57550: lectures were somewhat confusing

57642: With the exception of my section TA, I've had a pretty bad experience with the TAs for this course, the homework graders in particular. A good example is when one of my homework grades was not posted on Blackboard, even though I got it back and subsequent grades were posted.

First, I emailed Chao (who managed Blackboard for this course), who told me to talk to my section TA, who then told me to talk to a grader TA. I went to the office hours of all 3 grader TAs, to which none of them showed up. My homework dilemma was finally solved by me resubmitting the homework after writing a small note at the top saying the grade was not on Blackboard.

The problem I had with this course is with stupid technical things like Blackboard, everyone (professor, TAs, etc.) was overly anxious to say, "Sorry, not my area of responsibility. Go talk to someone else" often not specifying who I should talk to or specifying the wrong person altogether.

57822: My recitation TA did not know what was going on. He seemed to have knowledge but really he did not prepare enough questions for us to do. In fact, we just go over homework which does not help because we already turned in our homework before recitation. Also, it would really help if he prepared hard complex problems and go over them before an exam or such.

Lab was extremely long and dangerous. I even saw bar break in front of me.

Exams were extremely hard and not representative of my understanding. Exams were structured so that even if you study an entire week, you can get F on the test. Test not reflective of my knowledge there were just really hard problems like the pulley on there and he had to give us extension for the test. This is unbelievable.

57875: Exams were too long

57963: Textbook that Professor Ruina made us use for the first half of the course was not helpful. It taught me very little and inhibited the learning process. Professor Ruina knows the subject well, but is not very good at teaching it in a large lecture.

58293: Professor was sometimes rude in class and not helpful when answering questions. I learned to sit in the back and be quiet and just observe.

58333: Lecture was a bit disorganized and too fast at times, but I suppose recording the lectures and making them available online is a way to help this issue.

58376: The lecturer talks very quickly - or at least, quickly enough so that its hard to write notes and pay attention. That is why I would always have to see the lecture videos and stop the video very often to be able to take adequate and complete notes.

The homeworks from the first textbook were very hard. I feel like they were too challenging. They were counterproductive: the student would become so absorbed in getting the problem over with that he lost perspective and ended up learning little from doing that problem. The student focused more on finishing than on learning. Problems of that sort but slightly easier would be more instructive.

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58407: The instructor was not very effective and he was not helpful nor clear when answering questions. Instead of trying a different approach to explaining the material, he simply restated his earlier explanations.

58729: The lectures were often confusing. The professor would skip over parts of calculations assuming everyone could do the algebra. Seeing a problem from start to finish would have been helpful.

58819: One of the weaknesses I noticed is that I thought there really was no need to put MATLAB into the course material. I know that knowing how to solve problems with MATLAB is important and probably more useful tool in the future, however, it does not fit into this course. MATLAB can come later in more advanced courses. Moreover, labs were unnecessary. It taught me little, just took a lot of time to write lab reports.

58919: Labs seemed to be thrown in just to have a lab. Really didn't seem useful.

58948: The lecture is unorganized at times.

59515: labs were boring/ data often flawed, some of the problems in the first textbook (RP) were really confusingly worded

59677: none

59689: The first text was very weak. It had very interesting problems but the readings in it were not helpful.

59743: the lecture was confusing at times

59919: Nothing

59973: texts books were not as readily available nor as organized as they could be

60398: Exams were difficult, in my opinion.

60415: The homeworks are extremely difficult at times.

60474: good

60487: The lectures tended to go too fast, and the first book was hard to follow and had hard example problems. The homework also took a lot of time and was hard to complete without a lot of help from TA's.

60544: my recitation section was fairly useless

60637: didnt get much help when struggling.

60874: We should have walked through some problems on the board more.

61030: Laboratory schedule was weird. Also, really harsh grading on the lab reports.

61208: I think that the labs in this course(even though there were only 3 all semester), were not very useful, and did not enhance my understanding of the topics.

61597: Recitations were kind of useless. I guess it because I didn't need it to further my understanding of the course

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material.

61675: Scott did a good job with explaining material during the recitation, but other than gaining additional knowledge (which is, of course, extremely valuable) there was no benefit for going to section... for instance, physics courses generally have quizzes each week. Fortunately, my lab was in the third week so I had the benefit of relevant lectures and homework prior to attending my section. I think it would have been very helpful for the early lab sections to also have that benefit.

61692: Labs were very boring and not educational at all. The textbook was a little sloppy, but proficient enough.

61756: lectures were sometimes hard to follow

61761: The course grading was disorganized and sometimes assignments would be lost by the staff.

62299: My only complaint with the text is that upon entering the second text book there were topics which Ruina taught us different methods of solving than the book used. This was difficult when doing the book problems because all of the examples used the book method and not Ruina's method.

62370: The second prelim had a MATLAB question. The homework return time was inconsistent.

62543: The textbooks lining up with the lectures were possibly the weakest part. By showing us different methods in lecture, this also clashed with the TA's methods in section.

62720: The problems presented in lecture were not always the same difficulty as those seen in homework and on exams, so I think they could be made more useful if they were more challenging. Also, some laboratory sections didn't match up with the material learned in the class, so the first group of lab sections didn't learn the material presented in labs until after the lab write-up was due; this made doing well on the labs very difficult.

62789: The RP book was not helpful. Professors should not use their own book. If a student does not understand their professor the book is their life savior. In this case there was no back up. The book was exactly the lecture and was not helpful at all. It did not contain half of the necessary information.

62893: Homeworks weren't handed back on time and also weren't corrected properly (some of my solutions were wrong but they weren't marked so I couldn't study off of them), the posted homework solutions had many errors, the professor often covered the board and spoke quickly

63073: examinations were not always representative of course material.

63228: None

63293: The matlab programming part of this course was entirely unnecessary. You didn't need to program anything to get through that part of the course. I think that the matlab part should either be more clearly taught and explained and given as a required assignment, or it should just be dropped entirely for a later time. The prelims were much too easy, especially the second one, and the second prelim did not test new material. I am unsure of how hard the final will be because of this. The homework problems are typically good although there should be more answers provided in the answer keys, considering that many problems have numerous numerical calculations which can prevent one from seeing the bigger picture. If you plug numbers in wrong you should not be punished; if you understood the concept that is all that matters. I suggest for the problems involving plugging in a bunch of numbers that the numerical answers be given out so that students can check to see if they did things right. Otherwise students just do the homework once without checking it over since there is no way to see if it was done right or wrong.

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63454: The text used in the first half of the course (Ruina/Pratrap) is occasionally very unorganized, and i found it to be difficult to learn from its readings. That would probably be the biggest weakness of this entire course, and it makes this class very very difficult in the beginning; however, Beer/Johnston (used in the second half of the course) is a very helpful, clear, concise text.

63573: The exams were difficult and the grading was often very picky and technical. Some of the homework problems were difficult, overly long and were not gone over in class. Most of the time, the homework was nearly impossible to fully complete without extensive help from the TA.

63579: It was a difficult transition from statics to strength of materials.

Labs seemed unnecessary, and I didn't enjoy them.

64058: I would have preferred to not use Professor Ruina's book for the first half of the course. It is always helpful to have a second way of looking at things and that wasn't provided for the first half of the course.

64246: I felt that some of the problems from the first textbook of the course was very difficult and sometimes the examples for each chapters were a bit inadequate.

64338: The only weakness I could see in this course would be the book. The book itself was good, but it was hard to find and sold out quickly in the school store.

64385: The labs did not seem helpful. They seemed like they were there simply so we could have a lab section and grade.

64442: the labs werent that helpful

64450: Matlab seemed unnecessary on the homeworks and test, especially since we didn't need to write our own code

64560: The lab was the weakest part of the course. Because I had one of the later labs, we already knew the concepts behind the lab. I felt the lab was more tedious than anything. People who had the labs that started earlier in the semester might have felt differently about them.

64599: The laboratories could have tied in a little more to the course material that was being studied at the time.

64612: Exams have been graded too strictly in some cases, taking off too much credit where credit is due. Lecture was annoying. Professor Ruina teaches students the material in a way that caters to how he seems to learn best. Frequently this does not match how his students learn best. Professor Ruina was also, quite honestly, rude, crude, and disrespectful of students at times simply in the way he speaks to them. More than anything else in the course, this was the biggest problem. Most students agree that the material is straightforward, but Professor Ruina's personality and style tend to make the subject unnecessarily difficult.

64613: When the professor makes fun of people's questions or answers questions in a condescending manner (they may be very basic questions, or "could be found on the website"), it can destroy a student's willingness to ask more questions, for fear of "being stupid."
A lecturer must be patient with students learning the material for the first time, otherwise students will be intimidated of the professor and are unlikely to come to him with any questions or basic misunderstandings.

64620: The grading in this course particularly of the homework was horrible. Homeworks were almost always returned a month or more after they were originally handed in. In addition, the graders would fail to upload the grades to black board. IN one case I had to go see 3 different TAs before my grades were recorded. Yet perhaps worst of all was that

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the Graders would lose HW, one of my homework's got lost after i handed it in and since it was never found by the end of the semester i am receiving a 0/10 on it which is unfair and I know I am not the only case of this happening

64971: Many of the examinations were testing your ability to see "tricks" that were not necessarily related to your understanding of the material.

64975: The recitation was not very useful to me, mostly because I couldn't learn very well when people in the class kept interrupting and asking questions that were beside the point or kind of unnecessary. I was hoping for the recitations to be a little more like lecture, where our teacher went through how to do problems without interruptions. Also, the problems that Scott did in class were sometimes helpful, but sometimes repetitive because we had done so many of those on our homework already. I like to do problems that will help us understand our next homework and not repeat stuff on the last one.

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Extra Question # 1 :

At the end of the academic year, faculty may nominate outstanding Ph.D. candidates who served as teaching assistants. The Bolgiano Outstanding Teaching Award is presented at the MAE Commencement Ceremony in May. If you have interacted with any of the fo

57550: Scott Grutzik

57822: Betsy Ellis knows exactly whats going on and she is very friendly and helpful to students. She will try to explain so that a student would understand. She is very understanding and tries hard to help a student out.

58293: Scott Grutzik was probably the best TA I have ever had hands down. He knew the material and offered alternatives when certain explanations were not good enough. Excellent teacher.

58376: Betsy, Scott and Kirk were all extremely helpful TAs. They were always willing to help. Betsy met privately with some friends and I before each prelim so we could ask her questions and get personalized attention. Scott was my TA and his recitation was very instructive. He would go over class material in a more simple and comprehensible manner.

This course covers hard material and all three TAs were successful at making everything seem easier. They were very helpful in guiding me through problem set questions. They did not just tell me how to do it - they showed me the reasoning behind each step.

I am extremely thankful for having had them as TAs.

58407: Betsy Ellis is a wonderful TA. She is extremely clear when explaining the material. In addition, she really simplifies the material for a basic understanding before adding any complex concepts.

58819: Kirk Samaroo was my recitation TA. He stands out to help students by going around the classroom, giving individual instructions to students. It was very helpful for me because I would be stuck in a problem that others were okay with and Kirk would help me out.

58897: Scott- wonderful TA for explanations of concepts and gives great answers to questions during office hours.

58948: Betsy Ellis and Kirk Samaroo are good at explaining the course material.

59515: Chao Fang was very efficient and organized, he kept the lab running smoothly by providing the exact amount of information/introduction necessary (he didn't waste time).

59677: Scott Grutzik

59689: Scott Grutzik was a very clear and outstanding teacher in section. He met with me regularly outside of section to go over questions, and was very easy-going and willing to set up appointments with me.

60398: Kirk Samaroo: Very willing to help, able to answer questions, encouraging.

Chao Fang: Hard grader, didn't always understand my questions.

60474: good

60487: Scott was very helpful during office hours and had a good understanding of the material. Kirk also helped during office hours.

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60874: They were all helpful.

61208: Betsy Ellis: As my lab T.A., she was extremely helpful, and patient when it came to explaining the procedures.

Kirk Samaroo: As my recitation T.A., his set questions every week were very useful, and provided the adequate amount of challenge every week.

61675: Scott Grutzik really impressed me this semester. Generally, TAs do little more than review the lecture material or run through homework/sample problems. However, it was obvious that Scott has strong knowledge of the material because most sections he brought up weaknesses/lightly-covered points from lecture that he thought were important. Furthermore, Scott often showed us additional methods of completing problems that were not shown in lecture that proved to be helpful.

61692: Scott Grutzik is an extremely helpful and knowledgable TA, and he helped me a lot.

61756: Scott was a great TA and really knew how to break down the problems into more manageable pieces

61761: Betsy Ellis was an excellent lab TA and was very helpful when I brought questions to her in office hours. She was very well versed in the course material and her responses were always clear and concise.

62370: Scott Grutzik knows the material well, and he knows how to teach it. The notes that I took in my section with him were almost as useful as the notes I took in lecture.

62543: Kirk Samaroo was a good TA that really tried to make us understand the material.

62720: Betsy Ellis is an excellent lab TA, she is always well prepared and clearly masters the material; she also explains the lab content clearly and demonstrates how to use the lab equipment in performing the lab.
Kirk Samaroo makes discussion sections very useful by reviewing lecture material through example problems, which are more challenging than those presented in lecture. He challenges the students to try the problems on their own while providing assistance and he explains how to solve them very clearly in the end. He is also very helpful in answering questions that any student may have.

62893: Scott showed much interest in the subject matter; he showed us new techniques of solving the same problem and showed the logic as to why they worked.

62998: Betsy was alway really helpful during her office hours, and would often stay there late to help students still trying to finish before the homework graders came and collected the homework. She also explained things very well in lab.

63073: I met individually with Betsy, Chao and Kirk during the semester and they were all very helpful in exam preparation and homework assistance.

63228: I highly recommend Scott Gruitzik

63293: Betsy was a good lab TA and was good at explaining things.

63454: I absolutely think Scott Grutzik is deserving of this nomination. His command of the material is one of the best I've seen in a TA. Most TA's I have had struggle with the teaching aspect; however, Scott's recitations were so helpful and directed towards what we needed to learn. His enthusiasm to help during office hours and his going as far as scheduling 16 hours worth of extra office hours (in addition to what was already scheduled by Ruina) during finals week shows just how committed Scott is to his TA postion.

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63542: Kirk Samaroo's sections were extremely valuable. He did an excellent job of filling in the gaps and clearing up the confusions from the lecture.

63573: I attended most of the office hours of Scott Grutznik and he was very helpful in explaining what techniques were best in solving the homework problems. My TA Kirk Samaroo was also good at explaining the course material.

64058: They were all good.

64338: kirk Samaroo was one of the best TA's I have ever had. He made everyone feel extremely comfortable asking any questions in class providing for an extremely interactive environment every section.

64385: Kirk Samaroo was an amazing TA. He simplified the material and made it very easy to understand. He worked with us to make sure we all understood each concept and provided ample feed back on what we were doing wrong.

64442: Kirk Samaroo was an excellent TA, one of the best I've had at cornell so far. No matter how simple a question you asked he would always be willing to help you and make sure you understood the concepts.

64450: Kirk and Scott were both very helpful during office hours

64560: Kirk Samaroo was my TA. When I was stuck on a practice problem we were assigned to do during recitation, Kirk seemed to always be able to help me realize the missing concept without having to tell me directly. I feel this is most important when trying to help students learn. Also, Kirk was extremely helpful in office hours and often stayed later than he was obligated to for those who needed the help.

64599: Scott was very adamant about making sure all questions were properly answered during recitation and had a very good grasp of all the material, even critiquing the professor's methods to give students another way to approach the various problems.

64612: Scott Grutzik was a pleasure to have as a TA. He knew his stuff, backward and forward; he was personable, available, and flexible; but most importantly, he cared about his students, how well we do, and how well we understand the material. That's a gem of a TA if I've ever seen one. Thanks Scott!

64975: I went to one of Kirk's recitations once and I thought it was very helpful and structured well.

Scott is very helpful in office hours and he explains problems well. He has good command of the material.

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Extra Question # 2 :

Please comment on the Beer and Johnston Mechanics of Materials text.
(Useful? Strengths? Weaknesses?)

57550: It was good but I wished that there had been a solutions manual

57822: It was expensive for short book it cost 100 dollars.

57875: Good examples, could use clearer explanations in some spots

57963: VERY USEFUL

58293: This textbook got me through the second half of the course more than lectures did.

58333: I liked this textbook, especially because of the helpful example problems.

58376: The book examples are good. The text is very windy - it explains things the long way and that can sometimes also become complicated. The drawings and pictures were helpful. The problems had a nice range of easy to hard where starting with the easy and ending with a harder problem helped build understanding.

58407: The book is clear, although a bit more confusing than the Ruina Pratap Book. The examples are really helpful. The only weakness is the many editions of this book currently on the market. Professor Ruina did not exactly make this book readily accessible to the general student (i.e. the library).

58729: The examples were often very helpful and the book walked through concepts well.

58819: I don't really read textbooks, other than the problems at the end of each chapter for homework and for practice problems. I mostly rely on lecture.

58897: good

58948: It's a good and thorough book.

59515: good explanations, especially sample problems

59677: the textbook was very helpful

59689: Very good text for readings and examples. Some problems were bad, and unnecessarily long and complicated.

59743: useful, but then entire section on pins and screws that we didn't learn in class was confusing because it was still in the book

59919: Good. Nice Pictures.

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59973: Would have been nice if we had just used the normal Beer and Johnson since we (mechE's) need it for selection of materials next semester

60398: Very useful!

60415: It was useful. I found it somewhat confusing and it didn't match up with what Ruina was teaching us in class.

60487: This textbook was helpful and had good examples that helped when figuring out the homework problem. It also had answers in the back of the book so you would know whether or not you did the homework correctly before handing it in.

60544: generally a good text

60637: It was useful had a lot of good examples

60874: Sometimes wordy, but had good diagrams.

61030: No comment.

61208: I think this textbook was particularly helpful, especially the sample questions.

61597: Good and helpful textbook.

61675: I found the text to be easier to read than most text books... I normally have difficulty getting through technically-written works, but B&J was fairly straight-forward (included little irrelevant background information) and very clear in the explanations.

61756: Great book!! explained things well

61761: This text was very useful, but it was confusing when the lecturer and the textbook were out of sync.

62033: Somewhat. It gave some good definitions and examples of basic concepts of each section, but lacked examples on various problem solving.

62370: It was very useful. I read it often, and the stuff in it was good. The questions were usually easier than from the Ruina and Pratap Statics text, which was sometimes good and sometimes bad, but slightly more often bad. This usually happened when the question became an algebra problem halfway through.

62543: The material generally did not follow what we did in lecture.

62720: It was useful for explanations of the course material and to see relevant example problems.

62789: This book was really helpful. The examples were really helpful. I wish it had more examples though.

62893: More useful than the Ruina and Pratap text since it had clear examples. But it was difficult since we started in the middle of the book so it may have described things a bit more differently than we were used to.

62998: I think it should have been listed as required material for the course, or should have been made more available to students. I would have gotten it in the beginning of the semester, but by the time we started using it, it was halfway through the term and no one really wanted to spend more money on another book that offered just the homework

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problems. I think many students are merely looking at it for the problems instead of reading the material because so many people don't actually own it and find some way to get the problems for homework.

63073: good coverage of beam theory

63228: Very useful

63293: This is a really good text. There are a few weaknesses but it is a much improved text over the one from years before. There are really good examples and things are explained clearly.

63454: Very useful, nothing bad with the text, standard statics book.

63573: The Beer and Johnston book was very helpful because it provided detailed example problems and had answers in the back of the book to check your work. The chapters were fairly good at explaining the material.

63579: Some of the homework questions in the text were very hard, and the text didn't provide enough examples of problems. Otherwise, not a bad book.

64058: I liked it more than Ruina's book.

64246: I thought it was very useful. It provided really great examples but I thought that the section problems got really redundant and tedious.

64338: Overall I thought the book was very good. I seemed to learn more from the example problems than the actual text however.

64385: It was useful. I feel like it could go into more depth on the subjects. It would also be helpful to have the entire text not just the one section of it.

64442: good book, good examples that helped me to learn the material

64450: Some of the answers were wrong, but overall strong textbook and the examples helped me to learn the material.

64560: Example problems were well organized and helpful. Because Kraftees refused to order more books, it was difficult to get a hold of it after a certain point in the year. The numerical answers in the back of the book did help me gauge how well I was doing, but didn't help when I was so far off I couldn't understand how to get that number.

64599: All the pictures are very useful and the example problems are thorough.

64612: Very helpful. Good sample problems. Typically very beneficial when trying to learn how to solve problems.

64613: Great

64971: I found it to be more confusing and less clear than the other text.

64975: Very good. Easy to read. Educational.

65416: very good and usefull book

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Extra Question # 3 :

Please comment on the Ruina and Pratap Statics text.
(Useful? Strengths? Weaknesses?)

57550: I liked that it showed many examples on how to solve the problems but disliked some of the diagrams on the problems.
Solutions manual would have been helpful.
overall, I liked it although there were many little mistakes in the book

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57642: The text did little besides echo what was already said in lecture. Just kind of worked as a substitute for going to lecture, even though we had to go as we were graded on our iClicker responses. At least it was free since it was online.

57822: It was useful but wish there was an answer key

57867: Bad textbook choice: exactly the same as the lectures so could not be used to learn from if lecture style not helpful.

57875: Could use more varied examples that would help when doing homework

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57963: HORRIBLE

58293: Just as confusing as lecture and sometimes just as useless.

58333: Overall the book is good, but since the lecturer and book author are both Andy Ruina, it was likely that if you didn't understand the explanation of a concept in class, reading the book wouldn't help either since it was the same explanation. This was only an issue a few times though.

58350: Please emphasize the importance of understanding the foundations laid out in the early chapters. Recommend students to look back when they start to struggle with newer chapters by referring to the tips offered in earlier sections.

58376: The examples are hard to follow. The text is very helpful once you understand Ruina because it has very much of his voice in it. You first have to understand him in lecture and then his text will come to life. The problems assigned (which were always the most challenging) were very hard - in my opinion, unnecessarily hard.

58407: The book was very clear despite the many typos. Unfortunately, the material was presented in a single, specific manner and jargon. However, once this was overcome, the text was very helpful.

58729: This textbook was structured like the lectures, often skipping over things and taking short cuts. It was often confusing, and many of the problems being drawn by hand were sometimes hard to decipher.

58819: I don't really read textbooks, other than the problems at the end of each chapter for homework and for practice problems. I mostly rely on lecture.

58897: complicated examples. examples should be more simple for getting concepts across.

58919: Useful mainly because it's Ruina's class. He is very specific about how he wants things done, and the book addresses these issues. Another professor would probably want things done differently, and then the book wouldn't be helpful.

58948: It wasn't all that useful.

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59515: useful, but some problems were really hard to interpret- hard to read diagrams etc.

59677: the textbook was very helpful

59689: Good problems, bad readings.

59743: it was a little condescending at times

59919: Slightly difficult to read and not enticing like B&J

59973: Gots some interesting example problems in it

60398: Pretty useful, typos and mistakes are sometimes distracting though.

60415: It was helpful because the professor wrote the book. It matched the lectures perfectly.

60487: This book was only online (I didn't want to pay $40 for it) which made it very difficult to follow the text and refer to information when working on homework. The text was also hard to follow in general and I feel that the book as a whole did not do a good job of explaining concepts.

60544: many questions were ambiguous and the text itself was disorganized

60637: Bad textbook. Very hard to follow

60809: Good questions, too wordy explanations

60874: Sometimes wordy and hence confusing. I liked the examples though.

61030: No comment.

61208: i think that the other book was much better.

61597: Really liked the textbook. Definitely better than the statics sections of the Beer Johnson.

61675: I found that there was a little too much information included for the text to be outstanding. The information was all very interesting, but overall, was not entirely useful and made it difficult to grasp the important concepts in a chapter. I would also recommend that students purchase one of the printed copies because I personally dislike reading from a computer screen.

61756: I someimtes had a hard time with this book because i look to the book to explain things in a different way than the professor but they were both the same

61761: This text was helpful in mastering the lecturer's style of solving problems. The questions were especially helpful.

62033: Fairly. The problems, examples, formulas, and explanation were made well, but the book had several typos and errors.

62370: It was very useful. I did not read it often, since I learned all the stuff in it in lecture, and it was generally conceptually straightforward. The questions were usually harder than from the Beer and Johnston Mechanics of

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Materials text, which was sometimes good and sometimes bad, but slightly more often good. The questions improved my understanding of the material more and did not dissolve into algebra as often.

62543: There were a fair amount of typos in the book, otherwise it was pretty helpful.

62720: It was useful, but seemed a little bit too similar to the explanations received in lecture, so if a student had trouble understanding the material from lecture, reading the book wouldn't have helped very much. There also weren't many useful example problems.

62789: The RP book was not helpful. Professors should not use their own book. If a student does not understand their professor the book is their life savior. In this case there was no back up. The book was exactly the lecture and was not helpful at all. It did not contain half of the necessary information. It assumed you knew material that you not necessarily knew.

62893: The homework problems were quite difficult and the examples in the text could afford to be more helpful. There should be more simple examples in the text itself, and less tedious end of text examples that reinforce the material itself, rather than test the endurance of doing repetitive algebra. The text itself should provide more logical explanations and have examples as they go along to help explanations.

63073: typos, some fairly major and that affected homework problems

63228: Very useful

63293: The actual text part of this book I didn't really look at. I just used the book to read the problems. There is probably too much wording that students never read. But if you are interested I suppose there is some useful information.

63454: Very confusing, hard to gather information from the text. This text alone makes adapting to the class quite difficult, which is not necessarily a reflection of the text book alone but, because it is very in line with Ruina's teaching style, it would be nice to have a different option from which to learn. I feel a different text could make the first half of this class much better.

63573: This book was very inconvenient because I had to constantly scroll through a pdf file and it was very easy to lose track of what page I was on. There were rarely any answers given in the back of the book to check my work so I had no way of knowing if my answers were correct. Some specific sections of the book were hard to understand and ineffective at explaining the material.

63579: I liked how there were many example problems for each section, however the readings were hit/miss. Some sections didn't go in-depth enough, and that made me confused on how to do hw problems (ex. the gears, pulleys, etc. chapter).

64058: Too many errors and complicated views of different problems

64246: I thought that the chapters/sections didn't really explain the materials clearly and the problems were generally very difficult and the section examples didn't really help clarify.

64338: It was useful, but because it was primarily over the internet it was hard to go back and read over specific points.

64385: It was useful but had a lot of errors and the images for a lot of the problems were unclear and needed further explanations.

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64442: good information in general - many typos, some questions were poorly phrased or vague though, making it hard to answer those questions

64450: A lot of the answers were wrong. In the hydrostatics chapter I felt that a lot of material was lacking in terms of helping me to understand the concepts in that chapter. But I did, however, appreciate the boxes throughout the book that explained methods of solving certain problems.

64560: I wish this book did have some sort of answer key (just the final answer) or had suggestions on how to do certain problems if you were stuck.

64599: The material is very easy to understand but there were a lot of typos in some of the problems.

64612: Circuitous, overly elaborate, and stylistically bothersome. I didn't feel reading the sections helped me. Looking at some of the figures and explanations helped, but the rest of the text felt fairly useless.

64613: Text was difficult to understand

64620: Overall very easy to understand and useful

64971: I liked this text, I found it helpful. I thought it was a little long, but the explanations and examples were clear.

64975: It was ok. I don't think many of the students actually read the chapters because they were too long and complicated. There were some mistakes in the problem sets sections. It was very educational if you had a couple of hours to spend reading it.

65416: needs type editing, also the organization of the book was hard to understand and there questions were very far from the related content. liked that it was free though electronic format was hard to use

65438: I don't think we should use this book. It meshed perfectly with the class but this is only because Ruina teaches exactly like he writes his book. It would be more helpful to have a different perspective on the subject

65783: easy to understand. some errors caused confusion and soemtimes questions were unclear

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Extra Question # 4 :

Please comment on the use of i-clickers in this course.
(Useful? Strengths? Weaknesses?)

57550: got me to think -- good.

57642: Seemed to me just a nice way to force people to come to lecture.

57822: No, I had a previous class far away and often I was late because it takes 20 minutes to walk. I often missed the iclicker quizes.

58293: Annoying.

58333: I guess it's a fair way of judging participation, but personally I don't think professors should "take attendance". It's college and students should be responsible for themselves. But I suppose this rewards the people that are responsible, and perhaps motivates others to be more responsible.

58376: The quizzes are helpful because they help the student take away at least one important thing from the previous lecture. However, I don't think the i-clicker scores should be recorded. I did not usually attend lecture because I ALWAYS watch the videos since the professor talks too fast and I cannot take notes in class. I-clickers make it mandatory to attend lecture, even though some people prefer to watch the lectures online.

58407: Very helpful, although the fact that they were drawn on the board made the questions unclear and difficult at times.

58729: The I-clicker questions were rarely helpful.

58819: I didn't like it but I would say that it is useful. I hated the fact that I had to come to classes because of i-clicker quizzes when I could just watch video lectures at home. However, because of i-clicker quizzes, I came to class and I think it helped me do well in the course while I might have failed if I didn't come to classes.

58897: good for learning. but not so great for days when substitutes teach. they should incorporate it as well.

58919: Good

58948: It was a good way of participating in class.

59515: I didn't like it....it's annoying to have some problems SAT style and some not at all--if there was consistency in this i wouldn't have minded them.

59677: i dont like the i-clicker usage in the course

59689: I enjoyed using it very much.

59743: the i-clickers were useful in this class

59919: VERY GOOD! I appreciate how Ruina uses them to assess how the class is understanding the material. VERY Helpful!

59973: good

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60398: I think iClickers would be better for just doing them, as opposed to also including whether you answered correctly or not.

60415: It made me pay attention.

60487: The i-clickers didn't do much except give me some incentive to get to lecture on time.

60544: useful

60637: useful

60809: the class started earlier than its starting time so i missed a couple of quizes because I wasnt in class two minutes before 11:15

60874: They made class more fun.

61030: Useful.

61208: Although i do understand the usefulness of i-clickers, i think they were used excessively.

61597: I wish it could count less. Some people don't need to go to lecture, they shouldn't be penalized with 0 i-clicker scores.

61675: I really enjoyed how Professor Ruina used the iClicker. Rather than just using them as an attendance/grading tool, often they were used to track class progress and understanding of the material. I prefer this because it's an anonymous way of signaling the professor that there is some confusion without having to ask a question or feel embarrassed for slowing the lecture.

61756: BAD TIMING!! coming from a class far away I was never able to make it in time for the quizzes and i feel like that was unfair!

62299: Useful. Kept me engaged in lecture and really kept Ruina informed of the status of the class's level of understanding.

62370: The use of i-clickers in this course was the best I have seen. I don't know why.

62543: They definitely stimulated interest.

62720: Useful, but the i-clicker technology wasn't always working. Most of the time, however, it was very effective in getting students to participate.

62789: I think it was very pointless.

62893: useful

63073: the only incentive of attending lecture were the few points these were supposedly counted towards the grade

63228: Highly useful. Just don't start right away

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63293: The I-clicker quizzes bring people to class. There should be two quizzes, however. One in the beginning is fine, although not necessary, but especially a quiz in the middle to see if you were paying attention during lecture.

63454: Very useful, nice to have a quiz at the beginning of each section. Very glad it is not used excessively like in other classes.

63573: I-clickers were used in this class to answer the quiz at the beginning of section but were not all that helpful in learning the material. Because the quiz had to be short, the problems were not detailed enough to provide that much useful information.

63579: Useful

64058: not that useful.

64246: I thought that the i-clickers were really useful for this class especially since the quizzes at the beginning of the classes really helped review past materials.

64338: This was the best use of i-clickers in a class at Cornell I've had yet. the 5 point for correct, 4 point for incorrect method kept me going to lecture regularly, and made sure I was on my toes from the start of every lecture.

Thanks so much. It was a great class and I'm looking forward to dynamics next semester.

64385: I-clicker questions were helpful and pointed out some of the simple basics in the course.

64442: somewhat helpful

64450: Useful, but I think sometimes the questions were unfair (most of the time they were good, though). Also forced me to go to class, which I found very important since I got a lot more from attending class than watching the video lectures

64560: I think that this course made the best use of the iClicker. The points for the quiz questions was a significant enough amount that people actually tried hard to do well, but the fact that you still got 4 points for answering incorrectly made so that your grade wouldn't suffer because of a wrong answer. The use of iClicker to see how students felt about the difficulty of a problem was a very helpful gauge of what we were and weren't understanding.

64599: Average usefulness, the quiz questions were good.

64612: Useful. Kept me engaged, trying to learn, and thinking.

64620: Worst book I have ever used. There is a reason it has never been published. I actually stopped reading it because it just made everything hard to understand. Furthermore, the question in the book often are hand written and poor drawings making them imposible to understand. I honestly dont think I can name any positive aspects of the book.

64971: They were used well.

64975: no comment

65416: annoying, my grade suffered because of forgetfulness not because of lack of attendance.

65783: somewhat useful in taking attendance and quizzing knowledge of material

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