

College of Engineering, Cornell University
Course Evaluation Response Summary
Semester: Fall 2010 **Course Owner MAE**
Course: ENGRD 2020 Lec 1 **CID: 9785**
Instructor: Ruina
90 Responses, 112 Enrolled, 80.36% Response

Question	Mean	Count	1	2	3	4	5
1. How valuable were the assigned readings? 1=taught me little; 5=extremely educational	3.46	78	4	11	23	25	15
2. How valuable were the homework and/or computer assignments? 1=taught me little; 5=extremely educational	4.26	90	0	3	9	40	38
3. How valuable were the laboratories? 1=taught me little; 5=extremely educational	3.16	90	6	18	30	28	8
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	3.42	90	1	5	49	25	10
5. Did the lecturer stimulate your interest in the subject? 1=not at all; 5=stimulated great interest, inspired independent effort	3.67	89	3	9	23	33	21
6. Was the lecture presentation organized and clear? 1=disorganized and unclear; 5=very organized and lucid	3.76	90	1	11	21	33	24
7. Was the lecturer willing and able to help you overcome difficulties? 1=was of no help; 5=was very helpful	3.87	86	3	8	17	27	31
8. Rate the overall teaching effectiveness of your lecturer compared to others at Cornell. 1=worse than average; 5=much better than average	3.61	90	6	8	24	29	23
9. Was the recitation organized and clear? 1=not at all; 5=very organized, lucid	3.94	90	3	6	16	33	32
10. Was the recitation instructor willing and available to help you overcome difficulties? 1=was of no help; 5=was very helpful	4.30	88	1	3	12	25	47
11. How would you rate the recitation instructor's command of the course material? 1=poor command of material; 5=excellent command of material	4.60	89	0	1	5	23	60
12. What was the overall quality of the recitations and your recitation instructor? 1=worse than average; 5=much better than average	3.94	90	2	4	20	35	29
13. Overall, how does course compare with other technical courses you've taken at Cornell? 1=poorly, not educational; 5=excellently, extremely educational	3.77	88	1	9	20	37	21
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	3.30	90	0	6	57	21	6
15. How prepared were you for this course? 1=overprepared, it repeated material; 5=underprepared, course assumed unfamiliar knowledge	3.11	90	0	16	55	12	7
16. Was the code of academic integrity maintained in this course? 1=no, often violated; 5=yes, well maintained	4.71	87	1	0	5	11	70
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	--	90	71	8	6	0	5

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The instructor provided these special instructions:

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 following TA's you may provide supporting comments: Betsy Ellis; Chao Fang; Scott Grutzik or Kirk Samaroo.

Extra Question #2:

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

Extra Question #3:

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

Extra Question #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).

57073: Exams were fair and comprehensive, and I always had plenty of time to take them.

57074: Labs were very relevant to material and helped me retain knowledge by showing us a physical interpretation of the material.

57367: The Labs were really helpful and tied in well to the course material. I found myself drawing upon the labs to help with other assignments. The lectures were also really helpful. It was especially nice to be able to re-watch them before a test. The text was good for reinforcing concepts. I thought the class was interesting overall.

57431: I like the lecturer for this semester - he managed to keep students interested.

57604: the end of the course becomes much more interesting.

57725: the homeworks were very helpful, and the example that Professor Ruina did in class. I also liked how Professor Ruina constantly asked us if we had questions because it made sure that we understood what we were doing before we moved on

57885: Professor Ruina is enthusiastic about the course material and his lectures are well-paced, clear and interesting.

57902: The homework problems related well to the exams.

58146: examples in the text were helpful

58182: The book was very well written (Beer and Johnston) and my TA was also very helpful. Ruina knows his stuff and probably tried to make the course prepare us more for TAM 2030 but the amount of time required for problem sets was a bit ridiculous.

58360: I thought that lectures were very clear and the questions that students were encouraged to ask made it easier to understand. Additionally, Professor Ruina was very receptive to questions and meeting outside of class with questions.

58363: I think that Prof. Ruina does a great job of teaching us what we need to know, and he picks really good examples that cover everything we need to know.

58731: I like how Professor Ruina taught the course in a very different manner from Professor Petrina -- the two different perspectives on the subject matter really consolidated the ideas in my mind. Which is great because I had no idea what was going on the first time around.

58907: The homework was more difficult than the exams, guaranteeing a full knowledge of what was expected to be learned.

59099: Lectures/homework/recitation/text was useful, labs were not useful.

59336: The homework's were very difficult, but they forced you to gain a complete understanding of the material.

59503: The homeworks were very helpful in understanding the course material, although they were very long at points.

59598: ...

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59804: If you did the homework and paid enough attention in lecture, there isn't too much extra studying you need to do. The exams are a little difficult but reasonably straight-forward.

59847: Each topic built upon the last topic so you saw how it was useful.

59933: Lecture-helpful...it got better as the semester progressed =)
Recitation-helpful and concise
Lab-adequate representation of the course material
Text-good examples! I liked how there were many example problems with detailed/worked-out solutions
Homeworks-good and comprehensive practice
Exams- Exam 1 was too long, Exam 2 was good.
Course Content- Hydrostatics and the Bicycle, etc. were covered before Exam 2, but it was not on Exam 2..?

60144: The Bear Johnson text book was very good.

60264: I really love most things about this course. Ruina is a fantastic guy.

60405: recitation, Kirk was a good teacher. Homework problems were helpful because similar to the exam, but often too many were assigned.

60687: Beer and Johnston was a good textbook.

61522: The instructor teaches very well. The use of asking questions is helpful.

61671: I liked the class much more towards the second half of the semester because I think the lectures became much more organized and understandable, and Prof Ruina seemed to take more time to ensure that students knew what was going on.

61873: It is clear that Prof. Runia REALLY cares about the students and about us learning. He is ALWAYS willing to explain things again and again. Also he tries hard to be fair and is very good about that.

62132: Professor Ruina was very clear and organized, and insisted on resolving any and all questions about the material. Homework was difficult and time-consuming but pedagogical.

62285: Learning

62307: The example problems done in lecture were very helpful in teaching the material and preparing us for the hw's and tests

62399: the lecture provided a strong foundation for the basis of engineering

62491: Exams were terribly written from an English Language standpoint. Also, the given diagrams could not be used because they were drawn incorrectly. Also the "make any assumptions" policy is bogus and does not work in practice.

62526: The lectures were very interesting and the homework made you comprehend the material.

62773: Andy Ruina's interpretation of this course is good (logic, concise, emphasizing on understanding, introducing plenty of practical cases and designs, with clear yet not pretentious math application. What I get from this course is how to apply Mechanics principles and analysis to the real world to understand how things work.

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62892: It was good the information was all available in a clear fashion. The homeworks were tough but they prepared you for the exams.

63205: Lecture was extremely informative and properly covered the topics at hand. Recitations were very useful as material covered in lecture was more comprehensively explained. Laboratories, however, were not synchronized and thus not quite as useful as they could have been.

63262: Professor Ruina is a great instructor. I have had him twice now, and even though his problem sets are challenging, I have not learned more from any other professor than I have at Cornell.

63329: Homework system was excellent - I found it to be accurately rewarding and help me learn the material. The 6 hour policy let me really dig into the material and figure things out, even if I did not complete the problem sets, rewarding my efforts appropriately. I found that in other classes (namely PHYS 2213) efforts were directed towards completely the problem set at all costs --> homework in PHYS 2213 was primarily graded on completeness and resulted in a lot of slapping down answers and equations that I did not fully understand.

Videonote was also EXCELLENT. VERY VERY HELPFUL. Very useful tool for learning.

When small help sessions were held for Matlab and prelim review with the professor, I found they were extremely helpful. (only 2 were held during the duration of the semester however)

63498: I found that teaching by doing examples in both lecture and recitation was very helpful for learning the concepts.

63600: Recitation was very clear and helpful. My TA was good at going over homework problems that many students had trouble with. The use of the blackboard for illustrations and computations was also clear and helpful.

63692: The homeworks helped me become very familiar with all the material that was covered in lecture.

63926: This is the first lab course I've ever taken at Cornell where the labs actually helped me learn something. The homeworks were very helpful for me, and I benefitted more from them because of the 6 hour policy because it made me feel like I could spend my time really understanding each problem I did instead of just rushing through it for the sake of getting it done. The same can be said for the extended time on the prelims. I enjoyed Prof. Ruina's willingness to take time to answer questions in lecture.

63958: The lecture was well set-up and each one was well -structured. Labs were good and the homework problems were challenging.

64031: Office hours were very helpful.

64128: Reasonable grading policies.

64502: The tests were generally very fair, and tested one's ability to solve problems, rather than purely knowledge of the material.

64805: Although the material taught in the course could be dry at times, Professor Ruina's eccentricity made it much more interesting to pay attention during lecture.

64915: loved lecture, ruina is the best cornell professor i've had thus far. Keep it up dude, you're epic.

If at all possible you should create a small document on things that you find helpful as an epic professor and then send it out to the none epic professors.

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64932: Online text was a pain, though a nice option compared to having to buy a book. The labs and sections really helped reinforce material in the lectures.

64941: -better than average lectures
-video note was extremely helpful
-materials textbook was good
-homework was generally very hard, but helpful
-Prof genuinely cares about students
-labs were very good
-great course content

65358: Good lectures, very helpful for learning material, really liked professor Ruina
Homeworks were long but helpful in learning material

65499: The amount of homework is good. It helps as a great supplement in learning the material. Also, the lecture and sections were good in learning the concepts and theory of the material.

65670: Scott taught the material to us in a manner which made logical sense. It was obvious that Scott had an engineering mindset that was easy to identify with and made it easy to see steps in logical reasoning.

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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).

57073: Homeworks were far too long, and lectures were often hard to follow.

57074: Lecture was too fast and unclear at times.

57367: The homework assignments were interesting because they provided good examples, but I found that I didn't have the time to work out every problem assigned. I found recitation a little tedious at times, but helpful for the most part. The text was repetitive, and I felt that I didn't learn new things from it. The pace of the overall course was a little fast.

57431: Homeworks were long and often tedious - could me less numerical.

57604: instructor is a little smug.

57725: The labs were no particularly helpful and they were time consuming.

57885: I found the lab sessions pretty boring. The lab reports also took up massive amounts of time that, in my opinion, did not facilitate much learning - a lot of time spent on formatting, doing calculations over and over again, sometimes stating the obvious etc.

58146: first text had many mistakes

58182: Lectures not that helpful, huge emphasis on Matlab.

58360: My recitation was a little rough. It would have been more helpful to maybe go over a HW question from the week so that we had all seen the material and could ask specific questions.

58363: the homeworks were given back to us very slowly, the graders are very unorganized. Also, I didn't think either of the textbooks were organized or did a good job of explaining the concepts and how to go about solving certain problems. The beer and johnson was worse, but the ruina text wasn't easy to read.

58731: Exams were a tad easy but graded extremely harshly and so one mistake caused a significant drop in one's grade with respect to the class. For example, I switched one cosine for one sine in the beginning of a problem and lost twenty points out of a possible twenty-five -- something that I don't think is quite justified.

58907: The course is very sloppily organized and run. It takes several weeks to get problem sets and labs back, if at all.

59099: Labs were not useful.

59336: The lectures were often slowed down by questions. I believe that the discussions and office hours are more suitable places for independent questions

59358: exams tended to test the students ability to interpret the questions given rather than their understanding or application of the course material, often to the student's grade detriment

59503: The exams were decently fair, but often did not necessarily test all of the topics covered.

59598: Professor Ruina was of no help. He offered limited advice when approached and was condescending.

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59804: More connections could be drawn between the labs and the course material covered in lecture.

59847: The homeworks were too difficult and long.

59886: The lectures were organized in a confusing fashion. The way Ruina speaks (odd types of intonation) make it harder to understand what he's getting at

59933: All good.

60144: The Praptrap Ruina text book was very poor. The questions were not well defined, the grammar made it almost incomprehensible and it was not helpful to have a text book that explained something the same way as the professor. The recitation had no organization. The professors hand-writing was terrible. It was impossible to get any attention in office hours because they were only before homeworks were due and so crowded that the TA would no pay attention to you. If you had a general question, you could not get it answered.

60264: The prelims seemed a bit easy and covered an odd array of material.

60405: The lecture was much to fast and scattered

60687: The homework process was not very efficient and the Wed. 10 pm schedule did not work well for me. It was very hard to get graded material back, and I still have not received several homework assignments. This made it very hard to know what you did incorrectly, and the homework had very few comments to begin with. The exams I felt were unfairly graded. I would obtained a correct answer, but often times my solution was unorganized due to the time pressure and the grader took this to be a lack of knowledge.

61522: A section on moment about an axis is needed in the RP book. This course (although not stated in the description) implies the knowledge of MATH2930 Differential Equations as a prerequisite or corequisite. Those currently taking math 1920 along with this class are a disadvantage. Both textbooks need to be stocked at the beginning of the year. The laboratory manual is severely outdated. Equations need to be typed up, not handwritten. TA needs to check his email more often and reply to them.

61671: I did not especially like using the Ruina Praptrap textbook because some parts weren't very clear and the chapters were rather long. The Beer and Johnston book was more organized and clear.

61873: I felt the speed of the course could have been a little faster in the beginning/middle so that it could be a little slower towards the end.

62132: Labs, though educational, were often unnecessarily time-consuming.

62285: too much course coverage for one semester

62307: I thought the labs were more busy work than they were helpful

62399: Too many student went to office hours so it was difficult to receive help

62526: The laboratories were not as interesting

62887: should have used the full beer and johnson book since we use it in later courses

62892: There was a period where the homeworks didnt get returned and the solutions werent posted. Eventually they

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showed up but they hadnt really been graded I just got tens which was fine I just wanted to see the solutions. Eventually they were posted though.

63205: The homework was very comprehensive. However, the exams were a tad bit repetitive and not as comprehensive.

63262: My section TA did not have a good interaction with the students at times. He would mumble and did not interact with the class in the most efficient and beneficial way. His teaching strategy was to give us a problem to work on each class, but it was difficult to work on the problem when little background information was presented ahead of time. A mini-lesson at the beginning of section would have be most beneficial.

63329: I-clicker: I-clicker took place at the very beginning of the class, and was supposed to bolster attendance I imagine. I know I was supposed to get to class on time: I would often come in few minutes late late and miss this. Or I would forget my I-clicker. Resultantly I think I have a pretty miserable I-clicker grade. I think the actual quizzes are fine, and feedback for the instructor are fine, just the use of I-clicker attendance for 5% of the grade makes it into a I-gotta-go-to-class-for-I-clicker points, rather than I-gotta-go-to-class-so-I-can-learn. Although I admit I do see why this element is included with the presence of such an excellent resource as Videonote.

Basically, I did not feel like the I-clicker graded element was very helpful in my learning.

63600: The directions in the lab manual need to be revised and made clearer. I often felt hesitant following the directions in the manual, which was not reassuring considering we were breaking pieces of metal with very powerful equipment.

63654: Need more solutions in the back of Ruina Patrap text.

63692: The recitation was unfocused and it seemed that it was difficult for the instructor to utilize the full time. The lab write-ups were helpful, but the experiments themselves were uninteresting and boring.

63926: The days we would come to lecture and all of the notes were already on the board were hard because I found it difficult to follow along with what the professor was saying, and it what order we were supposed to follow along on the board.

63958: The lectures went a little too quickly so the course required a lot of outside reading and working to understand the material. But the greatest weakness of the course was homework grading. The system which I believe had only several people grading all of the homework was pretty awful. Homeworks were not thoroughly graded and they were not given back in a timely way.

64031: Homework grading was unorganized and slow.

64128: Extremely disorganized on administrative side - graders quit, homeworks ungraded, deadlines changed, etc.

64502: The homework assignments were long and tedious, and lacked motivation to be done because they were due late on Wednesday nights (which is also late in the week). Might I suggest encouraging homeworks to be handed in separately for each lecture? The assigned questions per lecture were already posted, and once I finally started just doing the questions the night of the lecture, the assignments were very reasonable; however if they were simply assigned to be due each Monday, Wednesday, and Friday, it would force students to start this much more productive habit at the beginning of the semester.

64536: material covered way too quickly

64805: Consistently wrong homework solutions/ delayed homework solutions.

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64932: I felt the course is very broad... I would have preferred two, more in depth classes: Statics, and Strength of Materials. The two subjects, while similar, are quite different and to me the gear-shift was a little rough.

64941: -tests were bizarre
-grading for everything was extremely vague, yet from what I think I know it wasn't fair (and doesn't follow the syllabus grading)
-recitation wasn't helpful
-statics textbook was very bad
-homework solutions were unclear and sometimes wrong
-excessive emphasis on vectors, etc when we'd be better off jumping into statics ASAP and then doing other stuff

65358: recitation i didnt find to be super helpful

65499: I did not like how there were two texts for the course.

65670: Lecturer did not present the material in a transparent and easily understood manner. He seemed to try to bite off more than he or the class could manage at one time.
The text for the first half of the class was extremely mediocre. Although Ruina wrote it to be different, he went in the wrong direction. I also showed the text to several practicing engineers who found it to be ineffective. I used my father's statics book from the 80's to learn the material because the two of us thought his book was unusable.

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Extra Question # 1 :

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57367: Betsy Ellis - Betsy was my lab TA, and was one of my favorite TAs I have had thus far. She was really helpful in lab and office hours, and was really good at explaining problems and hinting at how to solve them on my own. I felt like I learned a lot from her.

Kirk Samaroo- Kirk was my section TA. He was really good at teaching alternatives that made the concepts more clear. He was also a really good teacher in the sense that I felt like I was really learning, and not just trying to trudge through problems.

57546: Betsy Ellis was by far the best TA I've had at Cornell. The tone in which she explained the material was perfect, she had great mastery of the subject and always managed to explain something to me in a way which was clear and concise.

57725: Kirk Samaroo was very helpful when it came to helping me understand the material. Through his example he was able to make the concepts we were learning much clearer.

58182: Here is a typical discussion: Scott goes over some material covered in lecture. He then asks if we have any questions or encountered any problems with the homework (which was due the day before so no one even had looked at the next week's assignment) and then showed us problems that we might have trouble with or that he thought were worth going over. He was an outstanding TA.

58363: Betsy was my ta and lab instructor, and i think she did a great job of going over the necessary concepts, and then explaining problems we had trouble with, and picking out good example problems. Probably one of my favorite ta's so far at Cornell.

58533: Kirk Samaroo was one of the best recitation TAs I have ever had. He was prepared for section and had a lesson plan designed to help us understand the material discussed in lecture and the homeworks. He made confusing material even more clear than lecture did. He was extremely helpful.

58907: Chao Fang had an excellent knowledge of how to work the machines encountered in lab, and was always more than willing to aid me in their use when I ran into problems.

59336: Scott Grutzig was my TA. He did a very prepared. He had examples prepared, but was also willing to allow student's misunderstandings dictate the direction of the sections.

59358: Betsy Ellis was an intelligent, helpful, and accommodating lab instructor
Scott Grutzik was a very knowledgeable and helpful recitation instructor

59598: Betsy Ellis was extremely helpful and had excellent command of the material.

59847: I only worked with Besty Ellis and Kirk Samaroo but they were very helpful and some of the best TA's I have had. They deserve an award. They were both very knowledgeable and were good teachers.

59886: Scott Grutzik.....he was SO HELPFUL! And definitely knew the information well.

59933: Betsy Ellis is one of the most helpful and encouraging TA's. Betsy knows the course material really well, and thus is able to help students who have questions.

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Kirk Samaroo's discussion session is very helpful. He is concise and gets to the point.
Chao Fang is a good TA.

60264: Scott Grutzik was my TA, and he is pretty great. He clearly really knows this material, and in recitation he always made it really clear what was most important about what we were learning. He was not afraid to say that he did not like how something was taught in lecture and to explain it in a way that made more sense to him. He also did some pretty cool and instructive demonstrations and was always capable of doing whatever sort of examples anyone in the section wanted.

60405: Kirk Samaroo really simplified course material. He offered more abstract solutions for those interested in the material, but for those just trying to grasp the concepts enough to succeed on the exams (like me) he is able to provide a recipe to solve fundamental problems.

60559: kirk samaroo is a helpful and understand TA who should receive the bolgiano outstanding teaching award. even though he's not my TA, i find that going to his office hours is the most effective.

60687: Betsy was helpful and was very easy to relate to. She was very approachable and had a good hint to direct you to the right solution with out flat out telling you.

61522: I recommend Kirk Samaroo with high distinction. Kirk masters the material well and teaches it very clear with meaningful examples. He is also very helpful at office hours.

62132: Betsy Ellis is the most dedicated TA I've had, and probably will have, at Cornell. Just this week, Betsy stayed to resolve questions well after her normal office hours. Even when Thurston lost power, she continued to assist our learning by the light of cell phones and laptops. She knows the material very well and is always willing to help.

62307: Kirk was a very helpful TA. In recitation he did his best to make sure we understood the example questions and was always helpful when we had a question.

62399: Scott Grutzik He had a strong command for the material. Able to teach us bus the professor way and alternative way to solving the problem. He was always willing to help and didn't move on in teaching the material until all students were comfortable with it.

62773: Kirk Samaroo is good, because he is always prepared for recitation, and never wastes time. Besty Ellis is kind in lab and replies mail very quickly.

62887: Betsy and Kirk are really dedicated to their students and are willing to stay much longer than their designated office hours to help students understand the material. Scott does a really good job juggling all the students since he has his office hours when maximum number of students are in thurston 102 doing the hw

62892: Scott was an excellent TA, very knowledgeable and clear. I also had Betsy as a lab TA, she was also quite good.

62924: Kirk Samaroo
He really understands the material and tracks the progress of each student so that he can give extra help. He is willing to give us help at any time.

63205: Scott Grutzik was an excellent Teacher's Assistant. He made the material at hand seem very easy. He was always very prepared and seemed to have no trouble answering questions.

63329: Betsy Ellis: had as recitation TA

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-Really tried to help out the students--> very friendly/helpful
-Very effectively went over material from class --> explained existing methods, explained alternate methods
-always had office hours at the most dire time --> right before the problem sets was due

Overall, a very effective TA who cared about the well-being of the students and that I felt really helped us understand the material.

63600: Betsy Ellis is a very patient and knowledgeable teacher. She was very helpful to me in this course as my TA. She was very helpful in explaining difficult homework problems.

63654: I submit my recommendation for Betsy Ellis. She was always extremely helpful with answering my questions in an understandable way. She also had thorough knowledge of the subject and could show me multiple ways of doing a problem.

63926: Kirk was an incredibly effective TA for my section. I've never received that much individual attention in any other recitation for any class at Cornell.

63958: Kirk was very patient and knowledgeable

64031: Kirk was quite helpful during recitation and office hours. He knew the material well and could explain it.

64932: Betsy Ellis was a great lab TA, she knew the material well and was very helpful, all in all.

Scott Grutzik (despite being a first-time TA) led section well; they were organized and clear. He explained material well and often in a manner different from either the text or Prof. Ruina- which at first glance may seem counter-productive, but often times allowed me to look at a problem from a different angle, and understand it more in depth. I feel this did not work against the teachings in lecture, but rather as a useful supplement.

64941: I don't think any of them deserve an award

65415: Betsy, my lab TA was great! She was very helpful during labs, gave nice introductions to the material, and was always friendly.

65499: Scott Grutzik was my section TA. He knew the material very well and could present it in different ways to help provide a better understanding. He was able to make difficult concepts easier to grasp.

65670: I would say that Betsy Ellis is the typical engineering grad student; knows the material well but cannot convey it well enough to students because of a lack of social skills. This was apparent in the labs. Scott Grutzik was a fantastic recitation instructor. Instead of trying to teach Ruina's convoluted methods, he went with things that he knew well and were much easier for us to comprehend and put into practice.

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Extra Question # 2 :

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

57073: The Beer and Johnston text was very useful.

57367: I found this textbook to be ok. I was helpful if I missed a lecture and had decent examples, but I would have like to see more examples for different situations. It was typical of a math/science text.

57604: somewhat useful.

57725: Very helpful, the example were very clear and they helped when doing the homework

57885: There were some areas of it that are presented slightly differently from in the lectures. It might be better if such differences between the book and lecture can be highlighted earlier during the lectures so that we are less confused when we read the book.

57902: It's fine. The examples related well to the assigned problems.

58146: helpful, material dense though

58182: SUCH A GREAT TEXT BOOK

58360: I think this book is helpful, but I think the biggest problem is that since we only use this book in the second half of the class, some of the notation is different from what we have learned and what is used in lecture which can be confusing.

58363: I didn't really like this book, it doesn't explain concepts concisely or how to solve different types of problems well.

58533: Useful.

58731: I would have preferred if we had used the actual Mechanics of Materials text as opposed to the Statics & Mechanics text as we need to have Beer and Johnston's Mechanics of Materials text for future classes in the Mechanical Engineering major. That being said, I do like the format that Beer and Johnston provide in all of their texts.

58907: The style of this text is ideal for mechanical engineering

59336: The example problems were very good in helping out with the homework.

59503: I found that the homework problems were good, but the text was not very helpful in explaining the concepts and often left me more confused.

59598: Examples did not always help with understanding of the material. Fair questions, though.

59804: Good overall.

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59847: it was okay

59933: Good, needs solution manual

60041: While the text itself is fine and useful, I am frustrated with how it was stated in the first part of the course that "any Beer and Johnston text" would suffice for the second half of the semester. After having spent a considerable amount of money on "any Beer and Johnston text," it was then announced much later in the semester (once we had started material from that text) that the specific Beer and Johnston book you purchased actually mattered. By then, the "any Beer and Johnston" book I had purchased could not be returned, and I had to buy this specific one also, so as not to rely on the single, rarely available library copy which was necessary for the completion of the rest of the assignments for the semester.

60144: Really good, clear explanations, good examples

60264: Beer & Johnston is easy to read and useful on its own. However, there were almost a few too many times where the convention in the book didn't match what was happening in lecture, or where a method Ruina taught wasn't included.

60405: useful, sample solutions that walk you all the way through the solution are helpful

60485: Assumes specific applied cases when teaching material sometimes.

60559: The textbook is useful. The examples provided are a good template of the problems in the book.

60687: Good book, multitude of problems that make studying easy

61522: The special edition of this textbook (special printing for Andy Ruina) was not worth the money at \$90. This textbook is used in MAE 2120 in the following semester, so it would be worth it to purchase the full/original textbook (the part with statics). I would also preferred the hardcover (over the paperback special edition) since the hardcover would last much longer. Also, the special printing edition is larger, in terms of page size (it sticks up taller, but I don't like that). The special edition caused problems in stocking the book at the beginning of the semester.

61671: Very helpful. Clearly labeled equations and diagrams. Sample problems were very helpful and I liked how the chapter problems were interspersed between lessons so that you knew what the problems were testing you on.

61798: Useful sometimes. Would like to have had the entire text instead of an abbreviated version.

61873: Useful! It was helpful to hear the information explained a different way than in lecture.

62132: This text contained decent problems, but the reading was actually quite confusing.

62285: comprehensive

62307: It was useful, but rather expensive

62399: overall a good textbook

62526: It was very well explained and the questions were relevant

62773: Do not use the newest edition, because there is no old book for that. I borrowed the book for the last half of my semester. The book is not interesting to read, although it is well written.

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62892: It was okay, not great, particularly because Ruina didnt teach the same methods on several occasions, yet the homework required them.

63205: The material covered in the text is neatly laid out and useful.

63262: I found the Beer and Johnston Mechanics of Materials text to be useful. It's strength was that it was in a format that we, as students, are already used to. It's weakness was that it did not seem to provoke the in-depth thinking that the Ruina and Pratap Statics text did.

63329: Very comprehensive. Not very to-the-point-though.

Strengths:

-very comprehensive, good examples

Weaknesses:

-often text was filled with lots of "fluff"; complicated words, engineering context--> not very to the point, Although examples showed ways to solve problems, I felt general explanations of how to solve problems were a bit lacking.

63498: I found the examples to be for the most part easy to follow and clearly laid out. My only complain that it was not made clear that the book could be easily purchased from the cornell store.

63600: Good illustrations. Clear examples.

63692: The example problems are very helpful and the illustrations are very useful.

63702: Useful. Good examples. Readings sometimes hard to follow

63926: The text gave a useful overview of each topic in a concise manner. More examples would have been helpful.

63958: The text was good but Ruina often strayed from its methods of explanation. Its problems were well-written and tables well-organized.

64031: The book was useful because of the many examples unlike other books which have simplistic examples that are not helpful in solving assigned problems.

64502: It was pretty useful; for the most part ideas were presented clearly and effectively.

64915: never used it.

64932: I liked this text a lot. Nice end of chapter summaries and examples. Lots of good tables and figures.

64941: Overall: better than average

-we had to by a custom abridged edition for the same price as the full edition online (new), even though we will need the full book for MAE 2120

-can't be sold back

-soft cover is bad

-plenty of problems to solve

-ok amount of examples

-very good actual text; clear, concise, and detailed

-hate how problems are mixed throughout a chapter instead of all at the end

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65358: Good text, helpful and examples were good

65499: The problems were very helpful and intuitive.

65670: Good, but I chose to pick up an older edition of the B&J text and used the select printing copy for homework. \$90 is not a low cost printing. I got a book with the same material for \$8 shipped.

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Extra Question # 3 :

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

57073: There were many mistakes and typos in the Ruina and Pratap Statics text.

57074: Difficult to follow, lengthy and tedious.

57367: I liked that this text was less formal and had lots of examples. It was useful for examples, but the text was almost the same as the lectures. I like to see a little variation between the text and lectures because then if something doesn't make sense i have another source.

57604: useful, but takes on the smug personality of its author.

57725: Very helpful, the text was helpful, but it would have been better maybe talk through an example in the text section and then include the example given at the end of each chapter (as was done)

57885: Useful. Maybe provide more numerical answers at the back of the book. The questions serve as good practice for examinations but it is difficult to confirm if we really grasp the concepts if there are no numerical answers to double check our solutions with.

57902: Some of the pictures were hard to decipher, but it was useful. And there should be more answers in the back of the book.

58146: many mistakes, but nice, basic examples to help master fundamental concepts

58182: Useful in a sense, I now have a stronger intuition about how to do mechanics problems and what will probably happen.

58360: I think this book is very well written and easy to understand. I like the example problems and thought that it was very fitting for this class.

58363: The content is ok, but the appearance and unorganization makes its really hard to see and read.

58533: Would have been more useful if we had access to more solutions than just the homework solutions to help us with any extra practice we tried to do.

58731: I liked how differently it approached the study of Statics from Beer and Johnston. Beer and Johnston teach statics from a very physical perspective -- there are equations derived from logic or simply given which are then used to solve problems, the equations just make sense. Ruina and Pratrap approaches the study of Statics from a very mathematical perspective using multivariate calculus and matrix math. This can be more confusing for some but I found it very helpful to see a rigorous proof for the equations given in Beer and Johnston.

58907: This text was worse than useless - it often confused me more than it elucidated a subject. I appreciated the fact that it was free, but in the end I would have preferred to buy one single large book for the course.

59336: The problems were very difficult, but they were all fair. I didn't read much of the textbook because i felt that the lectures covered everything better than the book. I wish that there were more answers in the back of the book because it was often difficult to tell if you got a correct answer or not after working for a long time.

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59503: Similar to the Beer and Johnson book, the homework problems assigned from the textbook were very helpful and good practice, but sometimes the way the concepts were explained was slightly confusing. Overall it was a decent book though.

59598: Questions often went over students' heads. Readings had next to no relevance to the problems and offered limited help at best.

59804: Has many mistakes.

59847: hard to understand the questions because of the vague diagrams

59886: LOTS of mistakes and was somewhat focused on unrelated material such as matlab and extremely in depth vector mechanics.

59933: Good examples.

60144: Terrible, The Praptrap Ruina text book was very poor. The questions were not well defined, the grammar made it almost incomprehensible and it was not helpful to have a text book that explained something the same way as the professor. Probably the worst text I have ever seen.

60264: A little hard to read, but that may have only been because I was really bothered by it being on my computer. Otherwise, it's good stuff.

60405: the problems were very tough. quite a few errors. often times diagrams referred to in the text were located on separate pages and made flipping back and for a necessary nuisance

60559: The text is useful, but I prefer to have a textbook not written by the lecturer, so that I could have a different point of view when looking at the material. Learning something by myself one way and then learning a different way from the professor is an effective way to understand the concepts.

60687: Homework problems in this text were not as helpful as in Beer and Johnston and were often time hard to interpret, which led to confusion.

61522: The book is well written. Though it is meant to be readable, such effect leads to long paragraphs that appear unreadable. The homework problems are fairly difficult, perhaps impossible. A section on moment about an axis is needed. The availability of the book online is great, but the lack of stock at the cornell store was very confusing. All pictures need to be computerized. 'Psuedocode' in the book is unnecessary, as it practically models matlab, since this book is used only in this course. Simply writing the 'psuedocode' in matlab.

61671: I did not like the RP book as much because the chapters were very long and when I read them I felt like I was just reading it to get through it rather than picking up on important lessons.

61873: It is OK. I liked the example problems. It would be helpful if it had more solutions, because sometimes if you were doing the homework or practice problems wrong you wouldn't know until a few problems later.

62132: Lots of good problems and substantial amounts of information.

62285: need solutions

62307: Very useful

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62399: a couple of mistakes in the book but overall good

62526: It was a good book. Taught me the material well

62773: Ruina and Pratap Statics text is attracting to read since it has many episodes of applications and puzzles. Also it gives proofs in a quite (not complete tedious) mathematical way, which is pleasant.

62887: many mistakes in the problems and text, should be fixed, pictures of problems very unclear

62892: Maybe if it wasnt online it would have been alright, but online was quite irritating, I found it hard to find pages and the organization was a bit odd.

63205: Besides grammatical mistakes riddled throughout the text, there was nothing detrimental about the text and thus proved quite useful.

63262: The Ruina and Pratap Statics text was useful. It's strength was that it provoked deep thinking and challenged students to understand and not memorize the concepts presented. It's weakness was in it's formatting and slight disorganization/errors.

63329: I found this to be the most useful textbook.

Strengths:

-very to the point, explained things in a way I could easily understand them. Easy to learn from.

Weaknesses:

-mainly formatting: pdf did not have chapter bookmarks, answer key was lacking. Very difficult to check actual answers to problems without online posted answers.

63600: Some illustrations are too small. Answers not provided to questions.

63654: Needs more solutions in the back.

63692: The sample problems were pretty useful, but the homework problems were sometimes very difficult and had little supporting information in the text.

63702: Could use better examples.

63926: The examples were very helpful, but sometimes reading the actual text was confusing, either because of formatting or organization.

63958: The text had some very challenging problems which were good but the diagrams were often hand-drawn.

64031: The book was okay. It could be improved - unclear hand drawn diagrams could be removed with better ones.

64128: Still needs some work.

64502: Material was presented poorly; example problems were not mixed in to the chapter, instead placed at the end of the chapter and lacked relevance unless one was constantly flipping back and forth.

64805: Strengths: Lots of example problems.

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64915: never used it

64932: I thought this was an okay text. Typically I disapprove of instructors using their own texts but in this case I think it really complimented the course, and being free online is always a plus (though I prefer physical books- but there was a physical, for-cost version so I can't really complain)

64941: Overall: Bad

-longwinded yet unclear actual text

-FBD section should be shorter and more concise, talking about common errors rather than annoyingly excessive, yet obvious detail

-minor, but the text just didn't seem professional; pink computer generated diagrams and hand drawn stuff, not a plain simple look, but not a nice fancier look

-example problems explained their own problem well, but were hard to generalize

-I had to use Beer and Johnston Statics many times to learn the stuff

-stuff on wheels was good

-the PDF NEEDS bookmarks, it's LaTeX, even my NOTES have bookmarks

-press spell-check

-my favorite textbook is the Young and Freedman University Physics book for PHYS 1112, 2213, 2214; that would be a good model for text prose, examples, organization, layout, etc

65358: Not as good, didnt have useful examples to help solve homework problems, but the actual text was well written

65415: I liked it!

65499: The problems were great for thinking and applying the material. However, there should be more selected answers in the back in order to know if the problem was done correctly.

65670: See above, too math based. Obviously written by those who think as math people, not engineers. Using physical concepts and easily visualized diagrams is much better than vector cross products and the like. We are engineering students, we have very good spatial abilities, let us use them rather than using math to make up for it.

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Extra Question # 4 :

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

57073: Iclickers were helpful for understanding course material, but I don't think the iclicker quizzes should be a part of our grade.

57367: It was useful in the sense that I felt involved. I did not like that it constitutes 5% of our grade. I am forgetful and would often go to lecture and forget my clicker so I wouldn't get credit. I am a little annoyed that my grade will probably be low because of this.

57431: Great!

57604: very good

57725: helpful!

57885: Useful. The i-clicker quizzes served as good guides as to whether I was keeping up with the content that was being covered.

57902: I like the i-clickers.

58146: not that useful

58182: Didn't really attend lecture too much but it was nice to know if I got a question he asked correct.

58360: I think that the use of i-clickers in this class is effective and appropriate given the material.

58363: good!

58533: Would have been more helpful if it was in the middle of lecture than in the first couple minutes. Giving credit only at the beginning discourages going to class if you are running late.

58731: I found it useful if only as a mechanism to force myself to get up and get to class. I was mildly irritated in the beginning of the semester as I attended all but two classes but never had a functioning i-clicker, this issue being remedied, I have nothing negative to say about the use of the i-clicker.

58907: I-clickers were used just as much as they ought to be. They served their purpose (attendance and showing us the opinions of our peers)

59336: The use of iclickers was good. it was more for attendance purposes which I am perfectly fine with. Personally, i do not like the use of iclickers in the middle of lecture because it slows down the lecture

59503: The use of i-clickers was definitely helpful.

59598: Good for making people show up.

59804: Reasonable.

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59847: pointless

59886: Don't really add anything to the course other than quizzes in class....not really necessary in my opinion

59933: Useful...more i-clicker questions during class would help too.

60144: Good, ,made me go to class.

60264: Pretty much the best use of i-Clickers I've ever seen. Not too many or too few questions and consistent and interesting enough use that it wasn't just annoying to do.

60405: somewhat useful, often trick questions. enforces lecture attendance, but i didnt find the lecture that helpful so it knocked my grade down for no reason

60559: the quizzes were useful sometimes.

60687: The i-clickers were somewhat helpful but could have easily been excluded. I feel that because the lectures are offered via web video, that attendance should not play a factor in the grade, especially for off campus students who are affected by the weather in their commute.

61522: Iclicker use was appropriate, despite it monopolistic cost for the device.

61671: I like the use of iclickers in the course, but on occasion forgot my iclicker or was a minute late to class and missed the iclicker quiz. I would consider allowing students a couple of missed iclicker questions, and maybe putting the quizzes online for study purposes.

61873: Very helpful because it forced you to think through the problems on your own, so it promotes more understanding than just listening to the solution.

62132: Perfect. Some classes use them entirely too often, and others use them for poor questions. One or two well-defined questions a day is optimal.

62285: UNNECESSARY

62307: For Attendance?

62399: useful

62526: It was useful

62773: It makes me coming to every lecture, but it caused me to lost my i-clicker once and lost money.

62892: Pretty good, it got you thinking early in the class, better than just an attendance tool.

63205: The i-clickers seemed to serve no purpose other than record who attended class.

63262: The use of i-clickers was useful. It provided a good way to measure where a student was in the course without the pressure of having to get the question correct.

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63329: See Weaknesses of this Course (above)

63498: I found the use of i-clickers to be beneficial in the course as a tool for polling the class understanding. Though I would move the quizzes in to the center of the class time, as to better reinforce the material just stated.

63600: It was thoughtful to use the iClickers to gauge the speed of lectures in the beginning. During the second half of the course, they served only to indicate whether students were coming to lecture.

63692: The use of i-clickers was fine but could have been better if the purpose/grading method was clearer.

63926: I felt like most of the time, my i-clicker answers were just educated guesses, so for me it was not that beneficial.

63958: i-clickers were very useful in this class. They offered us a means to dictate the pace of the course and communicate with Ruina as a class.

64031: I-clickers didn't help with understanding of the material - they just served as a means of attendance.

64128: Forced me to go to lecture.
Should be used more often within the lecture though, not just the first quiz to confirm attendance.

64502: I thought the i-clickers were pointless. It aggravated me that I was required to attend lecture if the lectures were to be posted online, and easily replaced by simply reading the material if unable to get online.

64805: Probably only beneficial for checking attendance

64915: I like ur use of it to get feedback in addition to using it for quizzes.

64932: Useful at first in the A-slow down E-speed up use, but this kind of faded out. I think the quizzes were not that helpful.

64941: good way for the professor to get feedback, but waste time for students

65358: indifferent

65499: I do not think the i-clickers were very useful for this course.

65670: Good
