College of Engineering, Cornell University
Course Evaluation Response Summary
Semester: Spring 2011   Course Owner: MAE
Course: ENGRD 2030 Lec 1   CID: 4033
Instructor: Ruina
117 Responses, 131 Enrolled, 89.31% Response

Question	Mean	Count	1	2	3	4	5
1. How valuable were the assigned readings? 1=taught me little; 5=extremely educational	3.50	101	5	6	38	38	14
2. How valuable were the homework and/or computer assignments? 1=taught me little; 5=extremely educational	4.36	114	0	1	14	42	57
3. How valuable were the laboratories? 1=taught me little; 5=extremely educational	2.98	112	13	30	27	30	12
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	3.56	112	0	4	54	41	13
5. Did the lecturer stimulate your interest in the subject? 1=not at all; 5=stimulated great interest, inspired independent effort	3.76	113	3	8	26	52	24
6. Was the lecture presentation organized and clear? 1=disorganized and unclear; 5=very organized and lucid	4.08	114	1	5	23	40	45
7. Was the lecturer willing and able to help you overcome difficulties? 1=was of no help; 5=was very helpful	4.26	105	0	2	18	36	49
8. Rate the overall teaching effectiveness of your lecturer compared to others at Cornell. 1=worse than average; 5=much better than average	4.18	114	0	5	24	31	54
9. Was the recitation organized and clear? 1=not at all; 5=very organized, lucid	3.95	113	2	10	16	49	36
10. Was the recitation instructor willing and available to help you overcome difficulties? 1=was of no help; 5=was very helpful	4.19	110	0	7	11	46	46
11. How would you rate the recitation instructor's command of the course material? 1=poor command of material; 5=excellent command of material	4.56	112	0	2	5	33	72
12. What was the overall quality of the recitations and your recitation instructor? 1=worse than average; 5=much better than average	3.87	112	2	9	24	44	33
13. Overall, how does course compare with other technical courses you've taken at Cornell? 1=poorly, not educational; 5=excellently, extremely educational	4.00	110	0	5	22	51	32
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	3.13	112	0	12	75	23	2
15. How prepared were you for this course? 1=overprepared, it repeated material; 5=underprepared, course assumed unfamiliar knowledge	3.11	113	0	15	75	19	4
16. Was the code of academic integrity maintained in this course? 1=no, often violated; 5=yes, well maintained	4.48	111	1	1	9	33	67
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	--	114	90	5	7	5	7

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The instructor provided these special instructions:

Please answer the following questions.

Extra Queston #1:

At the end of the academic year, faculty may nominate outstanding Ph.D. candidates who served as teaching assistants. They are eligible to be considered for the Bolgiano Outstanding Teaching Award and/or Block Award which are presented at the MAE Commencement Ceremony in May. If you have interacted with any of the following TA's you may provide comments: Pranav Bhounsule; lauren Lazarus; James Melfi

Extra Queston #2:

Book. Please make specific constructive comments on how you did and did not find the textbook useful.

Extra Queston #3:

Problem Sessions. Did you think they were worth the time? Other suggestions, comments or criticisms?

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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).

66076: Computing, however all the matlab seemed formulic, it felt more like memorizing a method than understanding how to code out problems

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66459: Very good lecture. Enjoyed the MatLab examples.

66784: Homework, though long, was well designed to help us understand course material. At any given time, it seemed like the course was very well planned.

TA for problem sessions: Luke is quite a maverick, and good at his job.

Use of Matlab: Loved it. I would recommend even more Matlab use. I would love to use more built in functions. I would also recommend that we use Simulink to build models of the stuff we learn.

66938: The lectures were good for conceptual knowledge. The recitations went over all the fundamentals really well. Homeworks were challenging, which is preferable. Exams were fair and enjoyable(?)
Excellent student/teacher interaction, seems to geniunely care about students. It really makes a difference when the professor welcomes student input and makes changes proactively based on that.

67018: the grading was very FAIR and MOTIVATING...i wish all classes were like this, matlab was reasonable too, didnt think it was too bad

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67071: Do all the homework and understand it and you will do fine.

67274: The recitation and the labs were very useful in this course.

67415: Lecture: solid examples. decently paced, and always willing to explain things further
Recitation: super helpful with further examples
Lab: nice to get to interact with certain mechanisms physically
Computing: helpful introduction to engineering coding
HW: good review of key concepts (mostly)
Exams: extra time + extra questions lower stress significantly (though finals tend to increase time pressure)

67464: Labs were pointless.

67513: Lectures were educational and entertaining - I definitely gained an appreciation for dynamics and its relevance to everyday life.
Examinations were fair and labs did not require extensive lab reports.

67845: Homeworks were key in having a good grasp of how to solve dynamics problems. Lecture was very helpful in terms of developing an intuition for the mechanics and kinematics of different systems.

67880: Strengths are it is a very fair, well taught/structured class. It makes sense that resources are provided (textbook examples, solutions, old exams, lecture videos) to help learn the material, do the homework and prepare for tests. Also, the grading is really fair.

67979: Ruina is a good lecturer and is very fair.

67997: helpful lecture

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68040: This course allows us to see how the theories come into the math, which is interesting if not entirely useful.

68082: Having had Andy for statics in the previous semester made this course far better. -- mostly being used to his teaching style (3rd time I''ve had him)

I've become better at MATLAB

68174: Homeworks taught good material comprehension

68260: The homeworks were comprehensive and helped apply the material learned in lecture. They were good in that they were sometimes repetitive, to drill in the concepts. They were also good in that they covered several different example or applications. The examinations were fair, since the problems were similar to things we had seen in lecture and in homeworks. The lectures gave a strong background with good examples that were very helpful during homework.

68446: While the material is extremely difficult, the exams are not and are representative of the basics necessary. The grading system is also extremely fair.

68666: I like the Problem Sessions. see the comments below. Pranav is a good TA but a bit straight forward. he just works through the problems which is necessary for us because we don't do examples through all the way in class. Wish it was a mix of things.

68898: professor ruina is the best teacher i have ever had in all of my scholastic career

68966: Ruina is a great teacher.

69030: necessary

69100: The homeworks were the strength of this class. They were challenging and prepared you for the exam

69198: Contrary to what I've heard of this course as it was taught in years past, I thought overall it was manageable. Also, I did come out overall with a better understanding vector dynamics.

69364: Andy's lecture is great. Very clear and thorough.

69477: The lectures were quite interactive and helpful-- which is quite rare among other engineering lectures. Homeworks really helped me understand the material, but time consuming many times. I feel that the reputation of the instructor is underrated. He is actually quite good at teaching, and is a fair grader.

69595: The lectures were very clear and well structured. Although the pace was fast, the information was easy to follow because of the strength, organization and occasional humor in Andy Ruina's lecturing.

69715: The lectures were phenomenal.

69756: Andy Ruina is a very very intelligent man. He is very insightful. Homeworks were lengthy but helpful.

69782: There were many strengths associated with this course, and many of them had to do with Prof. Ruina's dedication to his students actually learning the subject well. The way he carried his lectures was a good balance of making seemingly simple examples slightly confusing, but allowing the students to truly see all of the components of a problem. The labs were well organized and carried out, and all of the TA's had a great command of the subject matter,

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and were extremely helpful. All of the office hours were also very helpful. Lastly, the extra time during prelims is extremely helpful. More courses should be run like this one was.

69864: All engineering professors at Cornell should be measured against Andy Ruina, he is the most effective, logical, and caring professor I have had. Matt Miller and Michel Louge can in no way compare, they are inconsiderate, uncaring, self-righteous, pompous bastards, exactly and totally the opposite of Ruina

69926: Exams were fair. Videos of lectures were extremely helpful.

69992: The lectures/homework were the most useful aspect.

70044: Ruina got a lot better this semester. I feel like he took a lot of our comments from last semester to heart. Better organized, more stimulating lectures and he explained things better than first semester. Also, the recitation was really good. A lot more clear and TAs seemed to know what was going better than this semester.

70061: Lab was actually useful. Lecture was, as well, and I am very glad that it was videotaped

70370: Ruina

70395: Best Professor. I don't feel like I need to read the book since his lectures are really clear. Recitations are really educational. Problems sessions were a good idea.

70514: The problem solving sessions did help a lot. They were stimulating, and when Luke taught one of mine, I really liked it a lot. He helped me understand the course material rather than try and rush through all the problems. The lectures were stimulating and interesting. Recitation was a great overview of the lecture and Pranav prepared great examples to help us learn how to do the problems.

70532: Practice problems in the text were the most helpful.

70571: Great organization of course. Great examples. Stimulates interest.

70597: Lectures were very useful, as Prof Ruina has great command of the material. He lectures in a logical and clear way that helped me understand concepts.

70607: I liked how the lab grades were not very important, i was still able to learn without adding a whole bunch of stress, the problem sessions were good too, they did tend to be a tad lengthy, though. Most of the exams were reasonable, however there were a couple where if you didnt get the first part right you got no points for the second part which was lame.

70628: Andy Ruina is a boss at a life and dynamics.

70630: I thought the computer assignments were very valuable. I also enjoyed lecture, as Prof. Ruina was entertaining and, above all, clear and helpful.

70642: Recitation with Pranav was great. He was difficult to understand at times, just due to the combination of his fast speaking rate and moderate accent, but he was always very organized. Even though I couldn't really follow during class (due to the speed at which we did problems), writing everything down and referencing it later always helped me understand the concepts for that week.

70908: The lectures were good, and the exams covered a good amount of material.

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70942: Recitation helped a lot...almost more than lecture I would say

70958: Lecture, recitation, and homeworks were useful.

70972: Matlab is useful

70987: Lectures were very clear and helpful. I really like Professor Ruina's teaching style. The problem sessions were also particularly helpful in learning to solve problems.

71002: Professor Ruina is probably the best professor I've had in engineering at conveying the subject material to the students in the most effective way possible.

I also felt that problem session were extremely helpful, and maybe would suggest holding more frequent, shorter sessions.

71051: Homework was helpful. Felt like I could prepare for tests off the homework and be fairly confident and prepared.

71061: Pranav was an excellent TA, and Ruina stimulates our interests during lectures with various demos.

71078: Lectures are informative, and homeworks develop a a good knowledge of the material

71157: The lectures were extremely helpful. The homeworks were difficult, but they really helped me learn the material. The homeworks were very good for helping me studying for the prelims. My recitation was very good, and helped me learn how to go about problems through to the end.

71255: The problem sessions were by far the most helpful part of the course. They help develop a deeper understanding of the material, and/or built up a good foundation.

71278: great lecture.
good homework.
Questionable grading rubric on exams.

71305: The strengths of this course are that the homeworks and material are both challenging, but get you to think about physics in a way that you never have before.

71334: Andy Ruina is a phenomenal professor. One of the very few whose primary concern is that students actually learn the material.

71415: The lectures and recitations were fairly clear.

71426: The labs were very useful for students in better understanding the materials that students need to know.

71556: The problem sessions were extremely helpful in this course. I believe in the following years there should be more than four of these meetings in a semester.

71578: lecture was good. ruina is great

71641: Pranav was a great TA. He was very helpful in teaching the material and was very willing to provide help to those who asked for it.

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71747: There are a lot of opportunities to perform well and master the material.

71799: The lectures were generally very effective. They tended to emphasize the fundamentals while hinting at complexities that were more thoroughly addressed in the homework. I can only guess that students dissatisfied with lecture weren't going in with the mindset that Professor Ruina's lecture was a good place to develop one's intuition for how to solve the problems.

I did like that the labs made the material a little more 'real' and slightly more 'casual' but I don't know whether they're an effective use of TAs' times.

The grading scheme is interesting and overall I think it was good. (At the same time, it is a little intimidating with so much weight on the testing)

72054: I learned.

72058: Andy is a great professor and usually gives a good lecture and Pranav was also very helpful in recitation.

72086: Lectures were amazing

72493: Recitation: we went over good example problems that were relevant to homework and tests.

72575: The computing section really taught me how to use MATLAB in a serious context.

72707: Very reasonable rule that if you spend more than 6 hours on homework you get full credit. It is very humane.

72796: After having Professor Ruina for 3 separate classes, I have grown to really like his teaching style. He sets up everything about this class in a way to really help the student. Also I like his grading system, which i feel the fairest one out of all the classes I have taken here.

72905: great lectures

72995: the homework was very interesting and relevant to the real world. The lectures were great and Ruina really knows his material very well.

73287: Ruina is the man. Organized, and keeps me awake, lots of good real world examples

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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).

66076: Resscitation was a waste of my time, examples where unclear and i am not always sure how they were related to the course. it seemed like the TA presented examples that where very different than the professors. also would just state problems on board, very passive learning enviroment

66459: Section was sometimes disorganized. Should go over more material instead of just doing practice problems.

66784: Labs were almost completely useless. Instead of a bunch of instructions on what to do, and mindlessly following them, I would prefer a design based lab, or a lab that does more to improve intuition about subject matter.

66938: Although dynamics shouldn't be a 4 credit course, it seems like it would be nice to have lectures 3 times a week. There was a hefty amount of material covered in little time.

67035: Not taking statics, I had a slow start but eventually I caught on.

67071: The recitations were not very organized or helpful.

67274: I felt because the lectures weren't to great it was kind of difficult to follow along with the book because it was written by the professor.

67415: Lecture: could be a bit more clear on objectives (give overviews / how everything fits together / into the bigger picture)
Recitation: hw hints would always be appreciated
Labs: last report was a bit on the long side / had less guidance than previous labs
Computing: stress that people should understand the dynamics behind the code before attempting to code - also should emphasize "easier" coding for doing hw (less probability of errors from code itself)
HW: sometimes a bit on the long side (i.e. 8 problem problem sets). Try to avoid "Do this problem 2x - once by hand, once with MATLab" type problems

67513: Homeworks are a little too long. Matlab was a little much. There should also be office hours more spread out throughout the week, rather than having all of them on Tuesday.

67845: My lab TA (Diego Hernandez) seems to be terrified of speaking in public. Thus, he did a terrible job explaining procedures for labs. I think he would be better suited in a position that doesn't involve interaction with other human beings.

67880: No weaknesses.

67979: It uses too much matlab instead of simply offering it as an option. The labs are useless.

67997: too much matlab

68040: The course needs 1 more lecture per weak, and should have less labs or be 4 credits.

68082: the laboratories should relate to the subject mater, or involve projectiles, or be less dry, if they involved explosions it would be better --- except the lawn mower one was halfway decent

68260: The labs were not useful at all, nor were they interesting.

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68446: None.

68666: Definitely an improvement from 2020 but maybe I'm just used to Ruina's teaching method. It seems that he did have a lack of passion for the subject of dynamics. he said it was pointless and not a subject for MAE. I feel if a professor feels we do not need it why are we learning about it then?

68734: Lectures were not helpful at all. Teacher would jump around not explaining himself well enough.

68898: nothing

68966: The labs are a little useless.

69030: no need for matlab

69100: This course covered a lot of material that is covered in differential equations

69198: The biggest issue I had was how MATLAB was taught. I understand that as an engineer, chances are I will have to use a computer to do much of my calculations, and I feel pretty comfortable writing code for homework. However on exams, the problem is that the MATLAB-related problems are written in a way where only if you studied Prof. Ruina's style you'd be able to work on them; there was a major stylistic discrepancy between his and my code for the same types of problem.

Also, I thought the lab was kind of useless in terms of teaching the material.

69364: Exams were a little bit too easy, we could be tested a bit more in depth.

69477: Sometimes the homeworks take a long time, not because of the challenge, but because of repetitive calculations. Perhaps having less number of higher-level problems might let students have more fun with homeworks.,

69595: I believed the problem solving sessions were a little too long causing students to become bored and uninterested in the given assignments, but if shortened I believe these problem solving sessions could be very useful.

69756: Homeworks were long.

69782: I would say the weakness was that there are one too many prelims. Reviewing for them took time away from actually learning material. Also, students should be allowed and encouraged to make appointments with the TA's. I had an experience were these were discouraged, and I usually find it helpful to meet separately with TA, especially before an exam. Overall great experience, however.

69786: laboratory is in general not useful.

69926: Labs and problems sessions were not that useful.

69992: Recitation/labs were pointless.

70044: I still hate the text book. I think it would improve the course a lot if Ruina did not use his own text book so that we got an explanation of material different than his. Also, a smidge heavy on the matlab. and the Lab was really really not that good.

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70061: textbook was a little difficult to work with but from ENGRD 2020 I already knew how the book worked

70370: Labs were a waste of time, as were problem sessions

70395: The labs are pointless

70514: The MATLAB problems on the test didn't really teach me much.

70532: I could not connect with the lecturing style; tests were demoralizing.

70571: Release the lab manual/instructions earlier than 1 week before lab begins.

70597: For the first third of the course, we learned virtually no new material (everything taught up to that point we had already learned in Physics 1112).

70607: The main trouble with this course is it requires some good thought, but occurs at a time when there is no time for much more than the required work. So, the course becomes harder than it actually is. Online textbooks are lame, and even though kraftees was selling some i feel like you should probably just get those in the bookstore.

70628: Labs were pretty pointless.

70630: Discussion sections often left something to be desired.

70642: While Matlab is a useful tool, I don't think that it should be tested on examinations. We should really focus on learning the dynamics, without having to worry about coding

70683: The computing was ridiculous- I didn't do any of the Matlab problems because it was just one too many things to worry about and it was a pointless waste of time.

I don't know about the rest of my peers but I just can't grasp most of the concepts of rotational motion still...

70908: The labs I felt were unnecessary.

70942: lecture is pretty disorganized.

70958: Labs weren't that useful.

70972: homeworks are too long

71002: The labs, while interesting, seemed like a waste of time and effort when compared to the other aspects of this course (i.e. problem sessions).

71051: Not a fan at all of written matlab on prelims/tests. I am fairly adept with the program, having taken an actual course on it, and can use it for homework problems. However, it did not turn out well on tests for me, its just different than having a computer to tell you what you did wrong when you tried to run the program.

71061: Lectures are sometimes hard to follow.

71078: labs are boring, but I tend to always find labs boring

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71157: Having 3 prelims made for a lot of work, however it was somewhat easier to study because it was clear what would be tested so I could focus on the correct material.

71255: The homework was inconsistent week to week in terms of difficulty and length.

71278: the labs were useless.

71305: I felt as if the problems given in recitation could have corresponded with the homework problems a little more.

71334: Labs could be a tad more exciting, but all elements were beneficial.

71366: The laboratory though interesting at times seemed kind of disconnected from the class.

71415: Content of labs was seemed slightly disconnected from lecture content. Perhaps they were more of a supplement.

71426: The homework is very long, and often repetitive.

71556: The labs in this class were not all that helpful in understanding the material in this course. If the labs had been related/about a homework problem assigned they would have been more beneficial.

71578: too much stuff for a 3 credit course -- lectures, sections, lab, problem session..

71641: The textbook was adequate, but using a different book might make the course better.

71747: The material is really taught only from one perspective, since the professor wrote the notebook and organized the labs.

71839: Labs were not that helpful, I just felt like they were there for busy work.

72054: The homework was somewhat of a pain. I would have loved to complete many of them, but because i had MAE2250 to worry about other classes and sleep, i often skipped out on my homework, much to my detriment. I really wish I had more time to devote to this course.

72058: No real complaints. Everything in the course was more than fair.

72086: Textbook is VERY confusing

72493: It feels like too much emphasis is being placed on modeling problems in Matlab. I understand that with computers being able to do complex calculations much faster than people, it makes sense to teach us this.

72575: The Laboratory component was not too involved and was not mentioned in lectures at all really.

72644: Lab was a waste of time.
Recitation was fairly useless.

72784: book hard to read and understand

72796: long hw assignments...maybe could have been split into being due two times a week. not really a weakness but

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a suggestion.

72905: homework are very long, too much matlab involved work

73332: Labs were essentially busywork. No real educational value. Lab was just for the sake of having a lab.

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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. They are eligible to be considered for the Bolgiano Outstanding Teaching Award and/or Block Award which are presented at the MAE Comme

66784: Pranav Bhounsule: did a great job with the prelim review sheets.

67018: Pranav was a great TA, really helped me understand the material and was very patient in helping us understand the topic in both recitation and problem sessions

67035: I was in the Pranav's morning section and unfortunately, he made a lot of numerical mistakes on the board which slowed the pace of the section down significantly.

67274: James Melfi - has been a great TA, he's always excited to answer questions and come up with his own practice problems. He definitely likes to excite people on the subject.

67415: James Melfi: He always went the extra mile in doing his recitations. Tried to prepare interesting problems and was always willing to work with students about issues.

67475: Pranav A. Bhounsule

67513: James Melfi was extremely helpful and knowledgeable about the subject matter.

67845: Pranav has an excellent intuition for dynamics and a thorough grasp of the course material. He is also a clear teacher and conveys all necessary concepts effectively to students.

67997: Pranav was helpful in office hour

68040: Pranav is awesome. He knows literally everything about the course and rarely makes mistakes that confuse people.

68082: Pranav Bhounsule - very good instructor

69198: Pranav Bhounsule

69477: Pranav was quite hardworking TA who wrote out study guide for us before every prelims, and seemed to really care about how students learned the material.

69595: Pranav Bhounsule is very smart and always very well prepared for discussion. He was a great TA who helped me further my understanding in the topic.

69715: Pranav Bhounsule

69756: James Melfi liked to think of interesting examples for recitations.

69782: Pranav Bhounsule was my TA, and one of the most outstanding instructors for section I've ever had. He was always extremely prepared for his sections, and took the time to answer all of our questions in a very clear manner that didn't just give away the answer. During problem sessions, he usually "played it by ear" and assigned us problems that

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he knew we would have trouble with, and proceeded to help us understand difficult concepts. Additionally, he took the time to email out the discussion questions weekly, and sent out his own review packet before every exam. I very much recommend him for the award described above.

69864: Pranav was amazing, his sections were very well presented and all of the problems and concepts he discussed were very useful. It's very clear that he has a deep and thorough understanding of the material, and is very willing to help any and all students that have questions, either about the course material, or on any related subject.

70044: Pranav was really good. Really organized, and provided excellent explanations. He did an amazing job filling in concepts that slipped through the lecture and had excellent examples prepared for sextion.

70061: Pranav was a very thorough and clear TA and always helped us when we needed it

70070: James Melfi was a great TA both in section and in lab. Always willing to help students understand, James commanded the material well and was easily approachable when questions needed to be asked.

70395: Pranav Bhounsule is one of the best TA's I have ever had. He is always willing to help and goes out of his way to help me when I am struggling. He shoes strong command of the subject and I trust everything he explains.

70514: Pranav Bhounsule: He was a wonderful TA. He was always prepared for any questions we had about the course material, prelims, or homework problems. He was very friendly and always willing to offer assistance.

70571: I nominate James Melfi for his outstanding expertise in the topics of Dynamics. He explains the topics very clearly. He creates interesting problems, stimulating creativity during recitation.

70597: Pranav Bhounsule has a good command of the course material, and he does useful examples in discussion section.

70607: Pranav is a very smart person. He knows dynamics.

70683: Pranav was extremely helpful and understanding as a TA. His lectures weren't very interesting or interactive, but I honestly think that was our fault for giving up trying- I think most of us didn't understand the material well enough to be very interactive at 10 on a wednesday morning.

70942: James Melfi is great! He was always willing to answer my wierd questions, and help out when I didn't understand something.

71002: Pranav is probably the best TA I've had in engineering in terms of his command of the subject material, as well as his conveyance of said material.

71061: Pranav Bhounsule. I think he has excellent command of the subject and he genuinely tries to teach us. This guy is brilliant.

71334: Pranav Bhonsule was always open and willing to help.

71578: Pranav Bhounsule

He has excellent command over the material and is helpful. He is always prepared for session and communicates effectively through email in non-session times

71641: Pranav was a great TA. As I said above, he was very helpful in teaching the material and was very willing to

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provide help to those who asked for it. He definitely contributed to my understanding of the course material.

71839: Pranav was awesome.

72054: Pranav is always willing to help and explains things very clearly. I approve.

72058: Pranav was a very helpful TA and was always willing to help.

72493: Pranav Bhounsule - patient teacher with great command of the material. Always willing to help.

72575: Pranav Bhounsule is so clear and detailed when he explains solutions to problems. It also helps that he doesn't just copy the answers off a paper he prepares beforehand, but solves problems in real-time with us in class.

72644: No.

72796: Pranav was my section TA. He ran a good section and was very helpful when i asked.

72905: James is great at what he do

73287: Pranav is very thorough and well versed in the material, one of my favorite recitation TA's

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Extra Question # 2 :

Book. Please make specific constructive comments on how you did and did not find the textbook useful.

66076: Lots of typos, overall decent though

66459: The book was useful, reading it helped me to understand the material. But a lot of times I felt like we were moving too fast.

66784: Too long and arduous to read. As it is, I spent more than 15 hours a week on the course, and if I had actually read all the relevant parts of the book, I would probably not have had time for any other course. Too long winded and beating around the bush. Its good for someone who is learning on their own, but since we have a good professor, we should have a book that is more of an aid than a long winded preacher.

66938: Textbook is really concise and well written, however, seems to have a lot of stuff that isn't needed to do well in dynamics. Takes time to jump around and find the important stuff.

67018: Good book, taught material well....

67035: In general, reading the textbook for a course is useful because it provides a different perspective on the material than that of the lecturer. Likewise, for this course, I would have preferred a textbook not written by the professor.

67274: The book was helpful in the fact that it was online and available. But the actual reading itself was sometimes incoherent and at times had irrelevant information, that was just confusing.

67415: Book could highlight key concepts a little better (it has a tendency to hide the most helpful tidbits in the margins / in extremely dense paragraphs)

67464: Textbook was much more useful than lecture.

67513: It was a good backup to go to when I was slightly lost in my homework and revision. For most of the time though, the lectures and the examples presented during lectures are sufficient to get me through the homework.

67845: I found reading the textbook quite useful at the beginning of the year. It enable me to start on a homework with more confidence and without having to check the solutions for given problems. However, by a third of the way through the year, an immense workload prevented me from reading the book's lengthy chapters.

67880: Book is very useful. It's good that it's free and a pdf so you can search it easily.

67997: useful

68040: The textbook was much better than statics (probably because professor ruina likes dynamics better) because we had some experience unlike statics.

68082: the text book is sometimes too comprehensive. however, if I had to re-teach myself all of physics from start to finish... I would use this book

68260: I did not feel the need to use the textbook very much because I could learn the material well from the lectures. However, a few times, for some of the homework problems I found similar problems in the textbook and used the textbook sample as a a guide to solve the homework problem. I do not like the boxes in the textbook. They are usually

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too detailed and end up confusing me.

68446: Grammatical errors in book.

68666: it just seemed like a lot to read the book and do problems. Much of the book sounds just like the professor. i would prefer sometimes getting another perspective so it is explained differently.

68734: No bad comments.

68898: its helpful.

68966: I didn't have to read it often, but the problems are great and the examples were helpful when I needed it.

69030: horrible

69100: The book had some great example problems. The nature of the homework made it so I did not have to refer much to the book. It was not an integral part of this course. I rarely read from it and i mainly used it for homework. Some of the homework questions were not always clear about what they were asking and sometimes I would think about it in an unintended way. No major flaws in the book though

69198: The biggest issue is that if you take good notes in lecture, there really is no point in referring to the book. Likewise, if you read the book, there is no reason to come to lecture besides the iClicker points. I felt the problem was that the lecture and textbook were far too similar to one another; that's what you get when your prof has written the book. I would've preferred it if I had 2 different interpretations of the same material to get a better understanding. The book is definitely better than the Beer and Johnston dynamics book I borrowed from the library to study from.

69477: The book had very helpful example problems that conceptually drew out the solution steps. However, sometimes the questions' wordings are not as clear.

69595: I tended not to use the book in this class for anything other than homework assignments therefore I cannot comment on its effectiveness.

69715: The textbook was extremely comprehensive.

69756: I like the textbook a lot. It explains things well.

69782: It was useful in the examples and short readings of the sections. I would have liked the problems to be a bit more realistic, and the pictures and illustrations throughout to be clearer and of higher quality (some were just hand drawings).

69864: The textbook was well written and had a great number of very helpful example problems.

69992: I didn't use the textbook except for homework problems.

70044: The book was okay, but I would highly encourage using a book that was not written by the lecture.

70061: I like that there are a ton of examples we can do but I don't like so much the way it's taught in the textbook. Sometimes the answers in the back were wrong, sometimes the book seemed to contradict what was taught in class

70070: So of the sample problems in the book assume some given conditions that aren't in the problem statement --

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please just fix this up. Overall I like the sample problems as a teaching tool though I generally find the "meat" of the text not as educational.

70370: I think it is very useful.

70395: The book was good but sometimes too long.

70514: Book pretty useful. I feel as though none of the sample problems went into much complexity as the homework problems.

70532: The book was good at providing useful equations and practice problems.

70571: The solution manual and all pictures in the book need to be digitized. That is, use LaTeX, not photocopies of pen and paper drawings and equations.

70597: I never read the book. There was no reason to, since this course is based mostly on logic and train of thought, there was very little amount of actual "information" that were taught in this course.

70607: So the textbook was online because i never wandered down to buy it. I guess that was my fault but it made it less readable. WHenever you wanted to scroll a little bit if you tried moving the little slider on the side you would jump 8 billion pages and completely lose your place, that was annoying. Sometimes the like box parts would jut out during other things and made it somewhat confusing. But it had good examples and problems. There should be more answers in the back so i can check my work.

70630: I rarely read the textbook before study week began; with my workload, I didn't have the time. But lecture was clear enough that I didn't need to read the textbook to understand the material.

The problems presented in the book are very thought-provoking. Some are easy, some are difficult. But for the most part, they are well worth doing.

70642: The textbook isn't particularly great or bad. I just think it'd be better if our book wasn't written by the professor, because if you don't follow Ruina's line of thought, then referencing the textbook doesn't help either since he wrote it.

70683: It was pretty good. the examples were pretty helpful.

70908: I liked the book. It explained things in a logical order.

70942: The book was pretty useful, several typos and things like that though, which made it seem a bit unprofessional.

70972: Some of the questions are just too long. It shouldn't take more than an hour to do 1 problem.

70987: Textbook examples are difficult to follow unless someone is explaining it to you.

71002: The problems in the textbook were very helpful, in that they mirrored the test problems well.

71051: Found it better to try homeworks, go back and read a section if necessary, and reason out the formulas, than to read straight through. Example problems really good, thorough discussion of topics.

71061: It would be nice if it had a summary page at the end of each chapter highlighting the key concepts and formulas.

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71078: Book was good, though lecture was usually enough, but for the few rough spots is was good to have the book to refer too.

71157: The textbook was extremely useful for learning the material and studying for tests (because Prof. Ruina wrote it).

71278: textbook was often very similar to lecture but clear and well organized.

71305: Although the book is not the most pleasing in appearance, I relied on the book for most of my learning. I like how detailed the book is even though at times the detail seems superfluous, and felt as if I was getting a complete understanding of the topic by reading and doing the example problems in the book.

71334: Statics and Dynamics book is written in a much more down-to-earth sort of way than the usual college textbook. This was VERY much appreciated.

71377: It would be MUCH BETTER if we used a book not written by Ruina. Since Ruina teaches in a very particular (and usually not generic way) and his book is written in the same way, we had no different methods of learning the material. Since I've had Ruina for three classes now I've finally started to understand his teaching methods, but I'm afraid once I start taking other classes and attempt to use Dynamics in the real world, his methods will not be applicable.

PLEASE PLEASE PLEASE assign a different book for upcoming semesters.

71415: I actually have not used the textbook for much more than problems.

71426: The book was okay

71556: The text book was useful because it was written by the professor teaching this course. The book was very useful for studying for exams, but if a student were to take this class with another instructor I'm not sure the book would be as useful to them.

71578: the readings weren't very helpful.

71747: Overall, I enjoy the textbook. However, it often felt repetitive of the lecture, because the material is approached in the same style.

71799: The book was organized in a logical order and there were no errors that significantly impaired learning.

71839: Pretty useful, I learned a lot from the book.

72054: Sometimes the book was rather unclear and hard to read. Sometimes it was and sometimes it wasnt an adequate substitute for having missed a class.

72058: The book needs more applicable examples.

72493: I did not often read through the text of the book. I would look for key equations and example problems. Some of the homework questions are phrased poorly.

72575: the textbook was pretty good actually. Lots of good examples. Although sometimes the homework questions were MUCH more difficult than the examples in the book.

72644: The book is good, though it doesn't seem all that professional.

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72670: Not a huge fan of the book - not totally clear, asides are not always helpful, and

72707: The textbook is very useful. It's also awesome that you can access it online, even though the pdf file sometimes freak out.

72784: hard to read and the way it is organized tended to confuse the subject.

72796: I found it hard to read through sections and learn exactly what i needed to solve the problems. It is a good reference though and the hw problems are good. Also some of the errors/typos are a problem but not a huge one

72905: A bit too long winded

72995: Th

73287: Looked at notes, or video lectures, never read it.

73332: Book was useful in that it was in the style of the lecture. If this book had been used by any other instructor, though, it would have been useless.

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Extra Question # 3 :

Problem Sessions. Did you think they were worth the time? Other suggestions, comments or criticisms?

66076: i liked the problem sessions and really liked my TA for them. it was useful to have them the day before each prelim

66459: Yes! They helped a lot.

66558: They were alright. I wish they matched up a little better with the kind of problems that Ruina focused on in the exams. At times, Luke strayed to topics and problems that weren't as relevant.

66784: Problem sessions were great. I did learn a lot during these sessions.

2 problems:
- 3 of the 4 sessions were the day after a prelim for this course. i.e. I had zero motivation to be doing more Dynamics when the problems sessions took place.

- We should go over some of the longer, more interesting hw problems as part of these sessions.

66938: The schedule of the problem sessions made it so that they were not worth the time for those who had it weeks after the course material was learned. It would be most helpful if the problem session occured a few days after the material was taught in lecture rather than a week or more after.

67018: They were probably the most integral part of this course...please continue with these

67035: The problem solving sessions were extremely extremely useful and clarified a lot of small but important details needed when doing dynamics problems.

67071: Problem session were one of the most educational aspects of the course.

67090: I thought they were a little disorganized. I think they should further emulate the AEW style/format.

67274: I felt the problem sessions were a waste of time. It was nice to get practice but you could also do that on your own in office hours if you really wanted to.

67415: They were extremely helpful. While coming in and spending extra time for dynamics wasn't that great, a lot of what we went over helped clarify key concepts.

67464: Yes worth it, much better than labs.

67475: They are useful but the length of them is a bit too long.

67513: I did not find them worth the time. I felt that it often dragged for too long and the sessions were a little unstructured, with the TA trying to fill the 2 hours. Maybe a one hour problem session would suffice.

67575: Helpful, especially before prelims

67845: I don't really think problem sessions were worth the time, but I'm sure they were for a lot of other students.

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67979: They were too long, but were fairly useful

67997: I thought they were very helpful

68040: I didn't think the problem sessions were worth the time at all....

68082: yeah, they were quite helpful.

68174: Not worth the time. It should be up to individual students to do extra practice if it is important to them.

68260: The problem sessions were extremely helpful. They helped me see if I was able to do problems without looking at notes or without any help. The level of the problems was hard enough to get me thinking and really experiencing the set up of an exam. They were similar to homework and exam problems. The problem sessions were helpful also in just getting more practice. The TA was really helpful in pointing out things we should include in our answer and ways of checking our result. It was also useful to see how other students solved the same problems in different ways giving you more tools to solve problems. I would get rid of the labs and put more problem sessions instead.

68446: Yes. They deepend my understanding of the subject matter.

68666: YES! they have been very
helpful in understand core concepts from other classes that are needed
to really understand the cores of dynamics. they seem much more
successful than labs and discussions. Having a small class room and a
hands-on experience with the concepts and how they work mathematically
and realistically makes this class seem much more understandable and
manageable.

it disects the problems and make sure you know the process and each piece well

68734: Complete waste of time. Should convert to a more helpful lab time.

68898: yes!

68966: No. We were doing things we had done on homework already, but the problems were easier than homework problems. Totally pointless.

69030: mine was bad. others were decent

69066: They were far more helpful than the labs, however they were a little long, probably something closer to an hour and a half would be better

69100: I really thought the problem sessions were great. I had mine before the exams and they were very beneficial because we could get verbal feedback on what we were doing correctly and what we were doing incorrectly

69198: I think the problem sessions were more helpful than the lab. I think the course would be better if the lab component got axed and had the problem sessions take its place.

69364: I did not find these to be worth the time. If there is ever an option between spending time in class and spending it out of class, out of class is my preference because then I can budget my own time.

69454: Problem Sessions were great!

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69477: It was too long. People actively solve problems for first hour, and gets tired and focuses on getting out of class after that.

69595: As mentioned above, I believe these sessions were worthwhile but a little too long. If cut down to an hour instead of two I believe students would be more willing to participate actively.

69715: Yes, they were a good review.

69756: A little too long, but good review.

69782: They are definitely worth the time; I learned a lot by working things out on the board. Thanks.

69786: It's good to have the problem seesions. THey help in understanding the materials discussed in class.

69864: Good place to discuss concepts and questions very thoroughly

69926: Not worth the time.

69992: Not worth the time.

70044: A little long, but helpful

70061: yes. and luke is very good at getting us to learn the material without him spoon feeding it to us

70070: I found them to be definitely worth the hours put in. That being said I feel it would make more sense if one replaced the recitations with problem sessions as they are more helpful and targeted (as there are less students) but essentially the same thing.

70117: I didn't think the problem sessions did much

70370: No, I felt like they were more like busy work. If the problem session is going to be required i think the course should be 4 credits.

70395: They were good because they refreshed my mind

70514: I think Luke was a wonderful TA for this purpose because he helped me learn the concepts rather than trying to rush us through too many problems in too little time, like Jacob Kotas did.

70532: Yes, they could have been made a bit shorter because we usually finished early.

70571: The solutions to the problem session problems need to be posted online, or emailed to the students after the class. The class needs to be shorter in length.

70597: They were a complete waste of time. The problems we worked on were way too easy. All they did was to take up more time in my already super busy schedule.

70607: Yes, though they were long and made me miss lunch.

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70628: Problem Sessions were extremely useful. Jakob did a great job leading it.

70630: Sometimes. There were so few of them that they didn't really help all that much.

70642: Problem sessions were usually good for the first hour, but they were painfully long.

70683: NO. I couldn't stand the problem sessions. they reminded me of AEWs and I couldn't stand those either- waste of time.

70908: Definitely. The problem sessions were very useful.

70942: Definitely worth the time.

70958: Yes.

70972: helpful

70987: Yes, very much so. Working through a problem with a partner is the most helpful way to learn.

71002: Problem sessions were extremely helpful.

71051: Not a bad excuse to have to take some time to practice.

71061: I think the problem sessions were somewhat of a good review, but wasn't completely worth the time. The problems assigned were often a bit easy. When it was difficult, we weren't able to get enough time with the TA dude to the number of students needing the TA.

71078: Poblem Sessions were fairly effective, though the one Luke taught was the best. Mostly because what he did instead was had us do one decently long problem which touched on the fundamentals of a specific type of problem, then after we all did it, he had us explain what we did for the problem then we all went over it. I feel this is much better than simply just doing problems for two hours.

71157: I thought they helped, but I felt the number of questions led to rushing instead of focusing on a few questions which focused on certain aspects of the current material. It was helpful to do questions in groups because it let me see how other students approached and solved the problems.

71255: Problem sessions were the most helpful. I think we should have more problem sessions and less lab.

71278: they were a good use of time.

71305: Yes, I thought that the problem sessions were worth the time. They helped me to gauge my understanding and deepen my understanding of the concepts presented.

71334: Yet another chance for me to be exposed to the information. I viewed them as helpful and worth my time.

71366: The problem sessions were awesome. They were a great way to go over problems and I learned a lot about what I was doing wrong in the class from them.

71415: They were helpful.

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71426: Somewhat useful

71556: They were definitely worth my time. There should be more of these during a semester.

71578: definitely. learned tons. it was good go through things with other people.

71641: I did think that the problem sessions were worth the time. They definitely helped me understand how to solve different kinds of problems. I actually think that it would be worthwhile to have them more frequently, perhaps even once per week. Although if the frequency was increased, perhaps the duration could be shortened.

71747: I think they were a good try and with some adjustments could become highly valuable. My issue was the point at which I had the problem session. It was after I completed material, in lecture and homework, so the work felt repetitive.

71799: The sessions were a little long but they were useful.

71839: Yes, the hands on problem solving was definitely a great atmosphere in which to learn

72054: Somewhat, went over old things in a very relaxed environment. They were helpful in the sense of getting one to not completely forget about previous course material. Maybe fewer more difficult questions that are much more recent? Going over really old easy things isnt always very helpful.

72057: Yes

72058: At first I thought they were going to be a pain but they turned out being the most helpful resource to me in the end. And it's a free prelim question!

72086: Yes they were. They helped in deeper understanding of the material covered in the book and lectures.

72493: Sort of: the problems were good example problems and my TA was very helpful, but the session was too long.

72575: Because pranav was teaching it, YES.

72644: They would have been more useful if Pranav had been better prepared for the problem sessions. Spent more time waiting around in the session than actually doing problems.

72670: Problem sessions were useful / interesting. Were worth the time. Would have preferred to be able to leave early if done early.

72707: Yes, they were quite helpful.

72784: worth my time

72796: I found them helpful. It forced me to keep up with the material a little more and it was nice working in groups to solve the problems before having to do the hw.

72905: Useful

72995: No, I do not think the problem sessions were worth the time.

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73287: TOO LONG SAVE ME!

73332: Educational, but my problem solving session instructor (Pranav) always seemed to leave the room during the sessions, and when it came to solutions, he was more caught up in the mathematics than helping us build intuition. I fully believe good problem solving intuition is much more important at this point in time than focusing on the math.