THE STUDENT ASSESSMENT OF INSTRUCTION SYSTEM
THE UNIVERSITY OF TENNESSEE

Engineering Fundamentals 151	Sec # BF4D49(21)	William R. Schleter	
Physics for Engineers I (LEC)	Fall 2013	Form G	# of Students: 115

Questions	Excellent	Very Good	Good	Fair	Poor	Very Poor	Item Mean
1. Course as a whole	30 (26%)	44 (38%)	26 (23%)	8 (7%)	5 (4%)	2 (2%)	3.70
2. Course content	26 (23%)	46 (40%)	33 (29%)	5 (4%)	3 (3%)	2 (2%)	3.70
3. Instructor overall	34 (30%)	45 (39%)	24 (21%)	8 (7%)	2 (2%)	2 (2%)	3.83
4. Instructor's contribution to students' understanding of concepts	31 (27%)	40 (35%)	29 (25%)	9 (8%)	4 (4%)	1 (1%)	3.72
5. Course organization	35 (31%)	34 (30%)	29 (26%)	10 (9%)	4 (4%)	1 (1%)	3.73
6. Opportunity to ask questions	29 (25%)	26 (23%)	36 (31%)	16 (14%)	3 (3%)	5 (4%)	3.41
7. Explanations by instructor	32 (28%)	33 (29%)	31 (27%)	14 (12%)	4 (3%)	1 (1%)	3.63
8. Contribution to student's ability to solve problems	32 (28%)	36 (31%)	29 (25%)	13 (11%)	4 (3%)	1 (1%)	3.66
9. Use of examples and illustrations	37 (32%)	37 (32%)	32 (28%)	6 (5%)	0 (0%)	3 (3%)	3.83
10. Length/difficulty of homework assignments	25 (22%)	23 (20%)	33 (29%)	15 (13%)	11 (10%)	8 (7%)	3.10
11. Exams' contribution to understanding content	29 (25%)	35 (30%)	33 (29%)	9 (8%)	3 (3%)	6 (5%)	3.52
12. Instructor's enthusiasm	38 (33%)	29 (25%)	35 (30%)	11 (10%)	1 (1%)	1 (1%)	3.77
13. Textbook overall was	15 (13%)	17 (15%)	29 (25%)	24 (21%)	15 (13%)	15 (13%)	2.55
14. Answers to students' questions	26 (23%)	30 (26%)	43 (38%)	11 (10%)	3 (3%)	1 (1%)	3.54
15. Relationship between lectures and text	21 (18%)	20 (18%)	28 (25%)	29 (25%)	8 (7%)	8 (7%)	2.94
16. Availability of extra help when needed	37 (32%)	38 (33%)	31 (27%)	7 (6%)	0 (0%)	2 (2%)	3.86
17. Interest in whether students learned	34 (30%)	29 (25%)	35 (30%)	15 (13%)	1 (1%)	1 (1%)	3.67
18. Amount you learned in the course	35 (30%)	32 (28%)	35 (30%)	11 (10%)	1 (1%)	1 (1%)	3.75
19. Relevance and usefulness of course content	38 (33%)	33 (29%)	32 (28%)	8 (7%)	2 (2%)	2 (2%)	3.79
20. Relevance and usefulness of assignments	39 (34%)	36 (32%)	24 (21%)	7 (6%)	3 (3%)	5 (4%)	3.75
21. Reasonableness of assigned work	28 (24%)	28 (24%)	30 (26%)	14 (12%)	8 (7%)	7 (6%)	3.29
22. Relationship of exams to material emphasized	33 (29%)	31 (27%)	32 (28%)	9 (8%)	4 (3%)	6 (5%)	3.54

Relative to other college courses you have taken	Much Higher			Average		Much Lower
23. Do you expect your grade in this course to be:	7 (10%)	24 (20%)	24 (20%)	29 (30%)	21 (20%)	6 (10%)	4 (0%)
24. The intellectual challenge presented was:	42 (40%)	42 (40%)	20 (20%)	10 (10%)	1 (0%)	0 (0%)	0 (0%)
25. The amount of effort your put into this course was:	48 (40%)	30 (30%)	21 (20%)	13 (10%)	2 (0%)	1 (0%)	0 (0%)
26. The amount of effort to succeed in this course was:	48 (40%)	41 (40%)	14 (10%)	10 (10%)	2 (0%)	0 (0%)	0 (0%)
27. Your involvement in this course (asgn, atnd, etc) was:	50 (40%)	28 (20%)	21 (20%)	13 (10%)	3 (0%)	0 (0%)	0 (0%)

28. On average, how many hours per week have you spent on this course, including attending classes, readings, reviewing notes, writing papers, and any other course related work?	
Under 2	1 (1%)
3-4	2 (2%)
5-6	7 (6%)
7-8	11 (10%)
9-10	12 (10%)
11-12	18 (16%)
13-14	18 (16%)
15-16	17 (15%)
17-18	6 (5%)
19-20	12 (10%)
21-22	6 (5%)
22 or >	5 (4%)

29. From the total average hours above, how many do you consider were valuable in advancing your education?	
Under 2	3 (3%)
3-4	4 (4%)
5-6	13 (11%)
7-8	16 (14%)
9-10	13 (11%)
11-12	18 (16%)
13-14	20 (18%)
15-16	11 (10%)
17-18	4 (4%)
19-20	5 (4%)
21-22	4 (4%)
22 or >	3 (3%)

30. Expected Grade	
A	39 (34%)
B+	33 (29%)
B	27 (23%)
C+	4 (3%)
C	10 (9%)
D	0 (0%)
F	0 (0%)
S	0 (0%)
NC	2 (2%)
Other	0 (0%)

31.Course Was	
In major	110 (96%)
In minor	0 (0%)
Dist. Req.	4 (3%)
Elective	0 (0%)
Other	1 (1%)

32.Class Composition	
Fresh	101 (88%)
Soph	11 (10%)
Junior	1 (1%)
Senior	2 (2%)
Grad	0 (0%)
Other	0 (0%)

33. Wanted to take course	
Yes	86 (75%)
No	7 (6%)
Neutral	22 (19%)

Student Responses to Open Ended Questions
Question #1: Was this class intellectually stimulating? Did it stretch your thinking?
• yes it was, and yes it did
• Yes
• Yes.
• yes it was very hard
• Yes, it was interesting.
• Yes. The concepts taught in this class are sometimes difficult to wrap your head around.
• Incredibly so. Never had physics before, felt like it was just right for me (even though those that already had physics were a bit more antsy than me)
• It was. I learned a lot about physics.
• The class taught me a lot and the duet teaching strategy worked out better than I expected.
• No
• (?ï¿½?Â°)?? ???
• alot.yes
• It was good.
• Yes- no prior experience in physics.
• Early units were fairly much review. It became much more interesting and stimulating as the semester progressed.
• They suck at teaching and no one ever knows how to do the work.
• Yes, was very informative.
• Yes, this was an extremely challenging class but I did learn a lot.
• n/a
• Yes, this class definitely made me use a ton of problem-solving skills. I've never had physics before, so it was a real challenge, but I enjoyed the material.
• yup
• Physics made me have to think about the world in a different way.
• Yes and it was confusing a times especially when in lecture the professors assumed when knew what to do and skipped steps.
• Yes it was, due to the fact that I learned about energy and the many ways that it affects the real world.
• Yes. It was a great review. The class was fairly difficult and did offer new concepts, but a lot of it brought back concepts I learned in high school.
• Yes; some of the homework problems presented were much more difficult and required more thinking than simply copying the process from an example or using the exact same formula each time.
• Homework problems and test questions were much harder than material or problems covered in lecture. So if by "intellectually stimulating" you mean feeling like a fish out of water, then sure, the course was intellectually stimulating.
• Yes! Very much, I felt like crying and not being able to do it multiple times!
• I think this class would have been intellectually stimulating except for the fact that it was extremely disorganized.
• Yes. I really think this class gave me a solid foundation for physics.
• Same as before.
• Hardest class ever
• It was the toughest class I had.
• Yes, it definitely stretched my thinking.
• I think this class was pretty intellectually stimulating most of the time and required thinking.
• yea n yea
• Yes, I learned a lot of new things.
• yes and yes
• Until the last module no, because I took physics in high school and therefore had already covered all this material in another class.
• This class was mentally stimulating. It was physics based course that created a strong foundation for later engineering courses down the road.
• Yes. Deeper understanding of physics.
• Yes it taught me that it is near impossible to teach myself physics and that some teachers couldn't care less how poor some people do.
• The class was difficult at first because I did not take physics in high school. However, after getting the basics down, I was able to do much better on the tests.
• Same before.
• Yes, the physics was very interesting. the course was very challenging though.

Student Responses to Open Ended Questions
Question #1: Was this class intellectually stimulating? Did it stretch your thinking?
• Yes this class was pretty challenging and difficult.
• Never had phsics before so yes. It stretched m mind a lot.
• Yes it did.
• yes especially the homework

Question #2: What aspects of this class contributed most to your learning?
• the book
• Homework
• Homeworks.
• working with peers.
• lecture and homework
• The material was well presented and professor Schleter is fun to watch. His enthusiasm kept me interested.
• Learning to derive information from givens.
• Homework was what help hammer concepts down for me
• Flexible Fridays were a great option.
• online homework
• The examples and the videos.
• Lecture
• Nothing
• Lecture, Recitation
• Problem Solving.
• Recitation and homework
• Examples in lecture.
• Everything.
• Homework was the most effective on any I have had here. Clickers also helped keep me engaged in lecture.
• When the lecture slowed down and really explained an aspect.
• The exams.
• Class sessions
• Nothing they all blow
• All of them
• Doing homework with friends and preparing for exams.
• The part of the lecture that Professor Scheleter taught.
• n/a
• None.
• The lectures and especially the homework helped me learn the most.
• the lectures
• Everything
• recitation and HW
• Probably the homework, even though it was really long.
• Recitation
• The homework was very tedious, so that contributed to most of my learning.
• THE FLEX FIRDAY VIDEO WAS INCREDIBLE. It took me out of a lecture setting where sleeping was inevitable and put me in front of a computer so that I could focus on the video, questions, and concepts.
• Doing the homework problems, while much more difficult and time consuming than I think they reasonably were, nonetheless provided the most practice to learning the concepts.
• Recitation, SI sessions, and having old exams posted on the website contributed most to my learning. Flexible football Fridays were also really helpful because I could pause the videos and re-watch the material if I didn't understand something. The videos were also longer, so they were able to cover the full extent of the material which was really helpful when it came to homework and exams.
• The abundance of help outside of this class is what makes it succeed.
• The homework and recitation.
• Help and study sessions.
• Same as before.
• Homework for sure
• Lecture notes
• The homework assignments helped a lot.

Question #2: What aspects of this class contributed most to your learning?
• Lecture examples and some hw
• I really enjoyed watching real-life examples and using things we could see to learn.
• The homework and recitation
• YEAH!
• demonstrations in lecture
• Homework and the help of my TA, Josh, and help sessions with Tom.
• the homework
• the homework because it was a part of my grade so it required me to do the work and help me learn the material
• The homework and group work outside of class both contributed most to the learning. Working with other students helped gained a better understanding of the material. Recitation classes with TA led classes were also helpful.
• When examples in class actually compared and were similar to what the homework and the test were like even though it was rare in many occasions.
• The demonstrations during lecture and the recitations.
• Posted Online Discusses Questions. Homework.
• The review slides.
• Same before.
• The lectures and examples in lecture and the help of my TA
• The hands on examples and the homeworks.
• lecture. recitations were hardly helpful at all.
• His examples
• The SI sessions.
• the working together with other classmates

Question #3: What aspects of this class detracted from your learning?
• nothing
• I spent more time on this class than any others.
• Large size.
• running out of time in lecture and not explaining things enough.
• length of homework and some homework content.
• The large size of the class.
• none
• nothing major
• None.
• less time was devoted to applications than should be
• The occasional rabbit trails.
• Recitation
• lectures not getting finished
• Tests being much harder than expected
• Clicker questions.
• Disorganization of lecture
• Remedial nature of early units.
• The time limit
• Team projects
• Sometimes explanations were unclear
• The bullshit
• None of them
• n/a
• Professor White's teaching style was a little distracting and sometimes even a little distracting because we were unable to finish the topics.
• Too much homework
• Some lectures and recitations didn't feel productive.
• Nothing really distracted me from learning.
• The lecture setting was least effective in teaching me the content.
• The online homework system was both a blessing and a curse; while you could check your answer and were provided with plenty of hints sometimes, other times there would be minor mistakes or relatively out-of-place problems within a module that made it difficult to do a problem if you weren't thinking of the exact same thing that the problem creator was. Partial credit did not exist on homework problems as well, so there was no way to particularly improve from one's mistakes; instead, it seemed more like bashing your head against a wall until you figure it out, whether by yourself or with outside help. Finally, the exams were often unreasonably short in terms of time, and as someone who had gotten used to spending excess amounts of time to do difficult problems on the homework, attempting to do many easier problems on the exam in an allotted time was a difficult adjustment.
• Most of the demonstrations done during lecture and during recitation were a waste of class time and did not benefit my learning. I felt like the EF 151 professors bickered and joked around more than they taught.
• Lab
• Once again, the high level of disorganization really killed this class.
• A large lecture hall, but even this wasn't too bad.
• Same as before.
• Prof. White goofing off too much
• the homework was too overwhelming
• Huge lectures
• The recitation sessions.
• too much hw and final project.
• I feel like sometimes the explanation for things was missing.
• The teacher just being slow
• the recitation period i felt like wasn't always dedicated to helping understand the material
• Aspects that detracted from my learning were the organization of projects with homework loads along with exams created a poor schedule to learn from.

Question #3: What aspects of this class detracted from your learning?
• Going to lecture and getting little help to understand the subject.
• No aspects of this class detracted from my learning.
• The very large class size
• Same before.
• The amount of homework was overwhelming.
• The difficulty of the content and the speed of the class.
• sill recitation projects.
• Some of the examples
• The lectures. They didn't help me with the homework or the exams.
• lots of homework and difficult
• the constant homework and difficult tests

Question #4: What suggestions do you have for improving the class?
• nothing
• Make lecture more productive.
• More productive labs.
• explain more in lecture with less dumb demonstrations.
• reduce the amount of homework.
• Smaller class even though I know that's not feasible.
• Great class. Maybe first explain why we are doing something before you teach it.
• Its pretty good! might try to do less experiments in recitation though and just do more practice problems.
• Nothing needs changing.
• less derivations more applications
• Finish all of the lectures or post a video of the leftover lecture notes.
• less clicker questions
• Going off for a lecture twice instead of once
• More projects
• finish the lectures!
• Less homework.
• None
• Longer classes or more streamlined lectures
• Use an entrance exam to standardize base level expectations of knowledge. I would even recommend a basics course that could be offered online and require for those that had little to no background in physics.
• More effort into discussion board
• N/A
• Firing the professors and hiring people who actually know how to teach. These people don't even know how to answer their own problems let alone teach.
• More optional friday lectures.
• Scheleter is the man!!!
• Go over examples in lecture that actually relate to the homework
• Recitation wasn't super helpful. I don't know how this could be improved; perhaps the TA's could ask students in class if they need clarification on certain topics or help with a homework problem. I definitely didn't understand the material any better from going to recitation. Other than that, no complaints. Thank you for explaining things so clearly, Professor Schleter!
• more class time around the centripetal forces module.
• Don't just give hints that correlate to textbook examples.
• too many people in the lecture and recitation we should have separated classroom for each class
• Do not spend time on the easier parts of lecture and then run out of time at the end, which is the time for harder/application problems.
• Nothing really. Even with all the work, the outcome was worth it.
• Online videos of lectures for study review and better understandings.
• Balancing out the homework would greatly improve the class in terms of pacing. The homework would frequently be too intensive (in terms of the depth of concepts), difficult, or long to be a good tool for studying for exams with. Sometimes it felt like the homework was more difficult than the exams just because the online system was so "black and white" on grading. Finally, the video lectures and the optional live lectures were the most informative of them all; normal lectures tended to run by much too fast for a student to learn the subject within the class time, instead having to resort to looking at notes to decipher how to understand something (though this is a subjective complaint). Thus, more optional lectures and "free Fridays" would help, allowing for either a more terse lecture for those who already know the subject or a more in-depth one for students who are struggling, thanks to the videos.
• I think the professors teaching EF need to remember that not everyone in that class has taken physics. I personally took 1 physics class prior to this, and it barely touched most of the material we covered. I think that lecture material needs to be centered around what we'll see on exams and in homework. If the professors would spend more time teaching relevant material, and less time joking around, I probably would have understood more of the material. I also can't stand when they run out of time in lecture because of stupid simulations and then just write "plug in!" and then write down the answer on an example. Even if they think it's obvious, it'd be nice to see the problem worked for those of us that struggle with this subject. They need to work on time management for sure.
• Not do lab--it didnt actually help, just took up time
• I would suggest perhaps a little more planning based on how this semester went.
• improve the lab. it was not very helpful

Question #4: What suggestions do you have for improving the class?
• A little longer lecture to get in a few more example problems. I felt sometimes but not often there were problems in the homework we had not seen in lecture.
• too much work.
• Same as before.
• make the 110% HW due a day later so we can get help in recitation.
• Make amount and difficulty of homework reasonable to succeed on tests
• make more classes to decrease the lecture size
• Improve the recitations.
• no rube goldberg machine. just gives us something to constantly worry about right before finals. less hw and get through lectures all the way.
• Maybe like I mentioned in 36, adding an explanation for things would be very helpful. Maybe you could do that by working through things step by step by step.
• Homework is difficult, make it slightly easier
• teach with more enthusiasm
• More thoroughly cover the material in lecture.
• it seems a lot like high school in the way that it is set up which i guess could be good for a weed-out class
• Suggestions for improving this class would be organizing projects in more flexible time locations on the academic calender for an improved course learning schedule.
• Do harder problems in class to help do problems.
• Teach better and actually help the majority of people in your course understand whats going on not just the ones that have had some form of physics before.
• Do not refer to the textbook as hints for the homework.
• Maybe posting everything we need to know about the final project at the beginning of Module 4.
• I know it would be practically impossible to get smaller classes, but if there was extra time in a smaller setting, I think the class would be more effective.
• Same before.
• Slow down the speed of the class.
• less silly recitation projects. I didn't feel like time was used wisely in recitation. I sometimes didnt learn anything extra.
• Not making the tests so different from the homework.
• Stop making the class a weed-out class.
• just little bit homework
• slower pace, detailed steps on how to solve problems