| THE STUDENT ASSESSMENT OF INSTRUCTION SYSTEMTHE UNIVERSITY OF TENNESSEE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Engineering Fundamentals 230 | Sec \# 43419 (LEC) | William | hleter |  |
| Comp Solution/Engr Problems (LEC) | Fall 2013 | Form A | \# of Students: 8 |  |


| Questions | Excellent |  | Very Good |  | Good |  | Fair |  | Poor |  | Very Poor |  | Item Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Course as a whole | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 2 | (25\%) | 1 | (12\%) | 0 | (0\%) | 3.12 |
| 2. Course content | 3 | (38\%) | 1 | (12\%) | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 3.62 |
| 3. Instructor's contribution to the course | 3 | (38\%) | 0 | (0\%) | 1 | (12\%) | 2 | (25\%) | 1 | (12\%) | 1 | (12\%) | 2.88 |
| 4. Instructor's effectiveness in teaching material | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | 3 | (38\%) | 1 | (12\%) | 0 | (0\%) | 3.12 |
| 5. Course organization | 2 | (25\%) | 3 | (38\%) | 0 | (0\%) | , | (38\%) | 0 | (0\%) |  | (0\%) | 3.50 |
| 6. Clarity of instructor's voice | 3 | (38\%) | 1 | (12\%) | 2 | (25\%) | 1 | (12\%) | 0 | (0\%) | 1 | (12\%) | 3.38 |
| 7. Explanations by instructor | 2 | (25\%) | 2 | (25\%) | 1 | (12\%) | 1 | (12\%) | 1 | (12\%) | 1 | (12\%) | 3.00 |
| 8. Ability to present alternative explanations | 2 | (25\%) | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 0 | (0\%) | 1 | (12\%) | 3.12 |
| 9. Use of examples and illustrations | 2 | (25\%) | 3 | (38\%) | 0 | (0\%) | 2 | (25\%) | 0 | (0\%) | 1 | (12\%) | 3.25 |
| 10. Quality of questions/problems raised by instructor | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | 1 | (12\%) | 3.00 |
| 11. Students' confidence in instructor's knowledge | 2 | (25\%) | 2 | (25\%) | 1 | (12\%) | 3 | (38\%) | 0 | (0\%) | 0 | (0\%) | 3.38 |
| 12. Instructor's enthusiasm | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 3 | (38\%) | 0 | (0\%) | 0 | (0\%) | 3.25 |
| 13. Encouragement given to students' self expression | 2 | (25\%) | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 0 | (0\%) | 1 | (12\%) | 3.12 |
| 14. Answers to students' questions | 3 | (38\%) | 0 | (0\%) | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | 1 | (12\%) | 3.12 |
| 15. Availability of extra help when needed | 3 | (38\%) | 2 | (25\%) | 0 | (0\%) |  | (25\%) | 0 | (0\%) | 1 | (12\%) | 3.38 |
| 16. Use of class time | 3 | (38\%) | 0 | (0\%) | 3 | (38\%) | 1 | (12\%) | 0 | (0\%) | 1 | (12\%) | 3.25 |
| 17. Interest in whether students learned | 2 | (25\%) | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 0 | (0\%) | 1 | (12\%) | 3.12 |
| 18. Amount you learned in the course | 3 | (38\%) | 0 | (0\%) | 2 | (25\%) | 3 | (38\%) | 0 | (0\%) |  | (0\%) | 3.38 |
| 19. Relevance and usefulness of course content | 3 | (38\%) | 1 | (12\%) | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) |  | (0\%) | 3.62 |
| 20. Evaluative and grading techniques | 3 | (38\%) | 1 | (12\%) | 2 | (25\%) | 1 | (12\%) | 0 | (0\%) | 1 | (12\%) | 3.38 |
| 21. Reasonableness of assigned work | 2 | (25\%) | 2 | (25\%) |  | (12\%) |  | (12\%) | 1 | (12\%) |  | (12\%) | 3.00 |
| 22. Clarity of students' responsibilities/requirements |  | (25\%) | 3 | (38\%) | 1 | (12\%) | 1 | (12\%) |  | (0\%) |  | (12\%) | 3.38 |


| Relative to other college courses you have taken | Much Higher |  |  |  |  |  | Average |  |  |  |  |  | Much Lower |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Do you expect your grade in this course to be: | 2 | (20\%) | 1 | (10\%) | 2 | (20\%) | 3 | (40\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) |
| 24. The intellectual challenge presented was: | 0 | (0\%) | 1 | (10\%) | 4 | (50\%) | 2 | (20\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) |
| 25. The amount of effort you put into this course was: | 1 | (10\%) | 1 | (10\%) | 2 | (20\%) | 4 | (50\%) | 0 | (0\%) |  | (0\%) | 0 | (0\%) |
| 26. The amount of effort to succeed in the course was: | 1 | (10\%) | 2 | (20\%) | 1 | (10\%) | 4 | (50\%) | 0 | (0\%) |  | (0\%) | 0 | (0\%) |
| 27. Your involvement in this course (asgn, atnd, etc) was: | 1 | (10\%) | 2 | (20\%) | 1 | (10\%) | 4 | (50\%) | 0 | (0\%) |  | (0\%) | 0 | (0\%) |


| 28. On average, how many <br> hours per week have you <br> spent on this course, <br> including attending classes, <br> readings, reviewing notes, <br> writing papers, and any other <br> course related work? |  |  |
| :--- | :--- | :--- |
| Under 2 | 0 | $(0 \%)$ |
| $3-4$ | 0 | $(0 \%)$ |
| $5-6$ | 4 | $(50 \%)$ |
| $7-8$ | 2 | $(25 \%)$ |
| $9-10$ | 0 | $(0 \%)$ |
| $11-12$ | 0 | $(0 \%)$ |
| $13-14$ | 1 | $(12 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 1 | $(12 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 29. From the total average <br> hours above, how many do <br> you consider were valuable in <br> advancing your education? |  |  |
| :--- | :--- | :--- |
| Under 2 | $1 \quad(12 \%)$ |  |
| $3-4$ | 0 | $(0 \%)$ |
| $5-6$ | 4 | $(50 \%)$ |
| $7-8$ | 2 | $(25 \%)$ |
| $9-10$ | 0 | $(0 \%)$ |
| $11-12$ | 0 | $(0 \%)$ |
| $13-14$ | 1 | $(12 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 30. Expected Grade |  |  |
| :--- | :--- | :--- |
| A | 2 | $(25 \%)$ |
| B + | 3 | $(38 \%)$ |
| B | 3 | $(38 \%)$ |
| C + | 0 | $(0 \%)$ |
| C | 0 | $(0 \%)$ |
| D | 0 | $(0 \%)$ |
| F | 0 | $(0 \%)$ |
| S | 0 | $(0 \%)$ |
| NC | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 31.Course Was |  |  |
| :--- | :--- | :--- |
| In major | 7 | $(88 \%)$ |
| In minor | 0 | $(0 \%)$ |
| Dist. Req. | 0 | $(0 \%)$ |
| Elective | 0 | $(0 \%)$ |
| Other | 1 | $(12 \%)$ |


| 32.Class Composition |  |  |
| :--- | :--- | :--- |
| Fresh | 1 | $(12 \%)$ |
| Soph | 4 | $(50 \%)$ |
| Junior | 1 | $(12 \%)$ |
| Senior | 2 | $(25 \%)$ |
| Grad | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 33. Wanted to take course |  |  |
| :--- | :--- | :--- |
| Yes | 5 | $(62 \%)$ |
| No | 0 | $(0 \%)$ |
| Neutral | 3 | $(38 \%)$ |


| Student Responses to Open Ended Questions |
| :--- |
| Question \#1: Was this class intellectually stimulating? Did it stretch your thinking? |
| - Yes, programming is challenging for me and this course challenged me just enough to expand my knowledge on it. |
| - This class definitely made you think. Since there is not one right way to accomplish the task, it was good at making you think about what would be the best |
| way to solve your problem using programming. |
| - No |
| - YES |
| - No. |
| - |


| Question \#2: What aspects of this class contributed most to your learning? |  |
| :--- | :--- |
| - The projects and help from the TAs. |  |
| - As much as I hated them, the projects is where you really learned everything. It made you think about everything past and present and how they interrelate |  |
| within the program. |  |
| - Examples |  |
| - The programing language |  |
| - The explanations and examples on the website. |  |
| - coding projects forced me to learn concepts |  |
| • |  |

## Question \#3: What aspects of this class detracted from your learning?

- TA's could have explained some of the topics better. The material later in the class was harder and I feel like they did not do the best job explaining the topics. So going into the tests I was worried about the material because no one knew how to do it.
- N/A
- Sometimes I think that the projects were too long and not enough help/guidance available. If you are like me and Matlab doesn't come natural, everything took twice as long and help was scarce due to a large volume of questions from students.
- NONE
- I could not see or follow what the teacher assistants were doing on the projector screen, and I sat near the front.
- 


## Question \#4: What suggestions do you have for improving the class?

- Just don't skim over stuff. I realize they are crunched for time but don't do an example and not explain what is going on.
- N/A
- I think that the homework after each lab should have more practice over the coding problems.
- I'm sorry but the length of the projects is absurd for a 2 hour credit course. Requiring hours upon hours of work on 4 separate projects is ridiculous, especially when you grade them very strictly. Losing 10 points on a project that works FLAWLESSLY because you didn't write enough notes or something is just petty. You should want students to succeed, not search for reasons to mark off.
- NONE
- A lot of the homework and test questions were kind of out of left field. You should clearly teach it before you ask it.
- 

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| :---: | :---: | :---: | :---: | :---: |
| Engineering Fundamentals 230 | Sec \# 43420 (LEC) | William | hleter |  |
| Comp Solution/Engr Problems (LEC) | Fall 2013 | Form A | \# of Students: 8 |  |


| Questions | Excellent |  | Very Good |  | Good |  | Fair |  | Poor |  | Very Poor |  | Item Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Course as a whole | 0 | (0\%) | 2 | (25\%) | 1 | (12\%) | 3 | (38\%) | 2 | (25\%) | 0 | (0\%) | 2.38 |
| 2. Course content | 0 | (0\%) | 3 | (38\%) | 2 | (25\%) | 1 | (12\%) | 1 | (12\%) | 1 | (12\%) | 2.62 |
| 3. Instructor's contribution to the course | 0 | (0\%) | 2 | (25\%) | 4 | (50\%) | 0 | (0\%) | 2 | (25\%) | 0 | (0\%) | 2.75 |
| 4. Instructor's effectiveness in teaching material | 0 | (0\%) | 3 | (38\%) | 1 | (12\%) | 3 | (38\%) | 1 | (12\%) | 0 | (0\%) | 2.75 |
| 5. Course organization | 3 | (38\%) | 3 | (38\%) | 0 | (0\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 3.88 |
| 6. Clarity of instructor's voice | 3 | (38\%) | 3 | (38\%) | 0 | (0\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 3.88 |
| 7. Explanations by instructor | 3 | (38\%) | 1 | (12\%) | 2 | (25\%) | 1 | (12\%) | 1 | (12\%) | 0 | (0\%) | 3.50 |
| 8. Ability to present alternative explanations | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | 4 | (50\%) | 0 | (0\%) | 0 | (0\%) | 3.25 |
| 9. Use of examples and illustrations | 2 | (25\%) | 3 | (38\%) | 1 | (12\%) | 0 | (0\%) | 2 | (25\%) | 0 | (0\%) | 3.38 |
| 10. Quality of questions/problems raised by instructor | 1 | (12\%) | 3 | (38\%) | 1 | (12\%) | 1 | (12\%) | 2 | (25\%) | 0 | (0\%) | 3.00 |
| 11. Students' confidence in instructor's knowledge | 3 | (38\%) | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 3.75 |
| 12. Instructor's enthusiasm | 2 | (25\%) | 1 | (12\%) | 3 | (38\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 3.38 |
| 13. Encouragement given to students' self expression | 1 | (12\%) | 1 | (12\%) | 2 | (25\%) | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | 2.62 |
| 14. Answers to students' questions | 2 | (25\%) | 3 | (38\%) | 0 | (0\%) | 3 | (38\%) | 0 | (0\%) | 0 | (0\%) | 3.50 |
| 15. Availability of extra help when needed | 3 | (38\%) | 3 | (38\%) | 0 | (0\%) | 1 | (12\%) | 1 | (12\%) | 0 | (0\%) | 3.75 |
| 16. Use of class time | 1 | (12\%) | 2 | (25\%) | 1 | (12\%) | 1 | (12\%) | 3 | (38\%) | 0 | (0\%) | 2.62 |
| 17. Interest in whether students learned | 2 | (25\%) | 1 | (12\%) | 1 | (12\%) | 4 | (50\%) | 0 | (0\%) | 0 | (0\%) | 3.12 |
| 18. Amount you learned in the course | 0 | (0\%) | 2 | (25\%) | 1 | (12\%) | 2 | (25\%) | 3 | (38\%) | 0 | (0\%) | 2.25 |
| 19. Relevance and usefulness of course content | 0 | (0\%) | 0 | (0\%) | 4 | (50\%) |  | (38\%) | 0 | (0\%) |  | (12\%) | 2.25 |
| 20. Evaluative and grading techniques | 0 | (0\%) | 2 | (25\%) | 3 | (38\%) | 2 | (25\%) | 0 | (0\%) | 1 | (12\%) | 2.62 |
| 21. Reasonableness of assigned work | 0 | (0\%) | 3 | (38\%) | 1 | (12\%) | 2 | (25\%) | 2 | (25\%) |  | (0\%) | 2.62 |
| 22. Clarity of students' responsibilities/requirements |  | (38\%) |  | (25\%) |  | (12\%) | 1 | (12\%) | 1 | (12\%) |  | (0\%) | 3.62 |


| Relative to other college courses you have taken | Much Higher |  |  |  |  |  | Average |  |  |  |  | Much Lower |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Do you expect your grade in this course to be: | 0 | (0\%) | 1 | (10\%) | 3 | (40\%) | 2 | (20\%) | 2 | (20\%) | 0 | (0\%) | 0 | (0\%) |
| 24. The intellectual challenge presented was: | 1 | (10\%) | 2 | (20\%) | 2 | (20\%) | 2 | (20\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) |
| 25. The amount of effort you put into this course was: | 2 | (20\%) | 3 | (40\%) | 1 | (10\%) | 1 | (10\%) | 0 | (0\%) | 1 | (10\%) | 0 | (0\%) |
| 26. The amount of effort to succeed in the course was: | 2 | (20\%) | 2 | (20\%) | 1 | (10\%) | 2 | (20\%) | 0 | (0\%) | 1 | (10\%) | 0 | (0\%) |
| 27. Your involvement in this course (asgn, atnd, etc) was: | 2 | (20\%) | 1 | (10\%) | 2 | (20\%) | 2 | (20\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) |


| 28. On average, how many <br> hours per week have you <br> spent on this course, <br> including attending classes, <br> readings, reviewing notes, <br> writing papers, and any other <br> course related work? |  |  |
| :--- | :--- | :--- |
| Under 2 | 0 | $(0 \%)$ |
| $3-4$ | 0 | $(0 \%)$ |
| $5-6$ | 2 | $(25 \%)$ |
| $7-8$ | 2 | $(25 \%)$ |
| $9-10$ | 1 | $(12 \%)$ |
| $11-12$ | 2 | $(25 \%)$ |
| $13-14$ | 0 | $(0 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 1 | $(12 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 29. From the total average <br> hours above, how many do <br> you consider were valuable in <br> advancing your education? |  |  |
| :--- | :--- | :--- |
| Under 2 |  | 0 |
| $3-4$ | 4 | $(50 \%)$ |
| $5-6$ | 3 | $(38 \%)$ |
| $7-8$ | 0 | $(0 \%)$ |
| $9-10$ | 0 | $(0 \%)$ |
| $11-12$ | 1 | $(12 \%)$ |
| $13-14$ | 0 | $(0 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 30. Expected Grade |  |  |
| :--- | :--- | :--- |
| A | 2 | $(25 \%)$ |
| B + | 3 | $(38 \%)$ |
| B | 2 | $(25 \%)$ |
| C + | 1 | $(12 \%)$ |
| C | 0 | $(0 \%)$ |
| D | 0 | $(0 \%)$ |
| F | 0 | $(0 \%)$ |
| S | 0 | $(0 \%)$ |
| NC | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 31.Course Was |  |  |
| :--- | :--- | :--- |
| In major | 7 | $(88 \%)$ |
| In minor | 0 | $(0 \%)$ |
| Dist. Req. | 1 | $(12 \%)$ |
| Elective | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 32.Class Composition |  |  |
| :--- | :--- | :--- |
| Fresh | 0 | $(0 \%)$ |
| Soph | $7 \quad(88 \%)$ |  |
| Junior | $1 \quad(12 \%)$ |  |
| Senior | 0 | $(0 \%)$ |
| Grad | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 33. Wanted to take course |  |  |
| :--- | :--- | :--- |
| Yes | 5 | $(62 \%)$ |
| No | 3 | $(38 \%)$ |
| Neutral | 0 | $(0 \%)$ |


| Student Responses to Open Ended Questions |
| :--- | :--- |
| Question \#1: Was this class intellectually stimulating? Did it stretch your thinking? |
| - Yes, the material definitely makes you think and problem solve to understand it. |
| • Not really I enjoyed EF 105 more than 230 because I really enjoyed Steve as a TA he made MATLAB fun 230 was atrocious it made me hate MATLAB |
| and going to class. |
| - Yes it took lots on internal problem solving. |
| - The class and subject as a whole requires a different sort of thinking than that of design, math, science, language, or history subjects. |
| - Very much so, I believe it stretched it a little to far considering the slightly poor amount of help that was given. |
| - It had its moments, but for the most part it was incredibly dull. |
| - No, just made me realize how irritating software can be. |


| Question \#2: What aspects of this class contributed most to your learning? |
| :--- | :--- |
| - The projects help solidify the knowledge in my mind. |
| - N/A |
| - The use of a engineering concepts introduced into a program. |
| - Projects contributed most to my learning |
| - The exams and homework, the projects were never helpful. They were just stressful and annoying. Never really learned anything because you can just learn |
| how to work with what you do know. |
| - The first and last project. The middle two felt like we learned a bit and then the difficulty leaped up so high we were unable to even begin learning on our |
| own. |
| - Debugging and learning to step through a process one step at a time |
| - Learning the different thought processes needed to excel in this course work |


| Question \#3: What aspects of this class detracted from your learning? |  |
| :--- | :--- |
| - I would rather have had more short answer than multiple choice homework. Some of the multiple choice questions seemed like trick questions. |  |
| - Exams were a pain and projects were a nuisance |  |
| - | Some things didn't seem necessary |
| - The entirety of the class as a whole is poorly taught. I do not believe this class should be taught by TA's and should definitely be more than a two - day |  |
| class. The closeness in age and relaxed and casual style of the TA's was distracting to me, the mundane and repetitive "labs" were unexciting and lost my |  |
| attention easily due to the vagueness of the material within them, and I found the jump between basic definitions taught during labs and the requirements of |  |
| projects to be incredibly frustrating. As an overview, I believe this classes teaches MATLAB definitions during class, but requires in depth coding to do |  |
| well. The two do match up, and those people who I do know to have succeeded are people with past programming knowledge and experience. |  |

## Question \#4: What suggestions do you have for improving the class?

- The class is good.
- Have the homeworks set up like EF 105 have more TA's like Steve from 105 and have the labs on the website more detailed like in EF 105 .
- Bump up the credit hours for what it should actually be work wise, make the class a MWF class, and hire a TEACHER to teach the class with lectures instead of TA's to read off of a web .
- Give more help with the projects, the more guidance you give us into how it really should be done the more we can learn because we can actually do it the correct way.
- Make the class period more interactive. We can all read the words from a page. Teach us/do something we can't do on our own time.
- Grade everyone equally and make projects less independent, at least at the beginning of the semester.
- Teach the thought process needed when presented with a programming problem.

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| :--- | :--- | :--- | :--- | :--- |


| Questions | Excellent | Very Good |  | Good |  | Fair |  | Poor |  | Very Poor |  | Item Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Course as a whole | 1 (11\%) | 3 | (33\%) | 2 | (22\%) | 2 | (22\%) | 0 | (0\%) | 1 | (11\%) | 3.00 |
| 2. Course content | 2 (22\%) | 2 | (22\%) | 3 | (33\%) | 2 | (22\%) | 0 | (0\%) | 0 | (0\%) | 3.44 |
| 3. Instructor's contribution to the course | 1 (11\%) | 3 | (33\%) | 1 | (11\%) | 1 | (11\%) | 2 | (22\%) | 1 | (11\%) | 2.67 |
| 4. Instructor's effectiveness in teaching material | 0 (0\%) | 3 | (33\%) | 2 | (22\%) |  | (22\%) | 1 | (11\%) | 1 | (11\%) | 2.56 |
| 5. Course organization | 3 (33\%) | 2 | (22\%) | 3 | (33\%) | 1 | (11\%) | 0 | (0\%) | 0 | (0\%) | 3.78 |
| 6. Clarity of instructor's voice | 3 (33\%) | 3 | (33\%) | 2 | (22\%) | 1 | (11\%) | 0 | (0\%) | 0 | (0\%) | 3.89 |
| 7. Explanations by instructor | 2 (22\%) | 2 | (22\%) | 3 | (33\%) | 1 | (11\%) | 0 | (0\%) | 1 | (11\%) | 3.22 |
| 8. Ability to present alternative explanations | 1 (11\%) | 2 | (22\%) | 4 | (44\%) | 1 | (11\%) | 0 | (0\%) | 1 | (11\%) | 3.00 |
| 9. Use of examples and illustrations | (44\%) | 1 | (11\%) | 0 | (0\%) |  | (33\%) | 1 | (11\%) | 0 | (0\%) | 3.44 |
| 10. Quality of questions/problems raised by instructor | 1 (11\%) | 2 | (22\%) | 3 | (33\%) | 3 | (33\%) | 0 | (0\%) | 0 | (0\%) | 3.11 |
| 11. Students' confidence in instructor's knowledge | 3 (33\%) | 2 | (22\%) | 3 | (33\%) | 1 | (11\%) | 0 | (0\%) | 0 | (0\%) | 3.78 |
| 12. Instructor's enthusiasm | 2 (22\%) | 3 | (33\%) | 2 | (22\%) | 1 | (11\%) | 1 | (11\%) | 0 | (0\%) | 3.44 |
| 13. Encouragement given to students' self expression | 0 (0\%) | 2 | (22\%) | 5 | (56\%) | 1 | (11\%) | 0 | (0\%) | 1 | (11\%) | 2.78 |
| 14. Answers to students' questions | 1 (11\%) | 4 | (44\%) | 2 | (22\%) | 1 | (11\%) | 0 | (0\%) | 1 | (11\%) | 3.22 |
| 15. Availability of extra help when needed | 3 (33\%) | 3 | (33\%) | 2 | (22\%) | 0 | (0\%) | 1 | (11\%) | 0 | (0\%) | 3.78 |
| 16. Use of class time | 2 (22\%) | 1 | (11\%) | 4 | (44\%) | 2 | (22\%) | 0 | (0\%) | 0 | (0\%) | 3.33 |
| 17. Interest in whether students learned | 1 (11\%) | 3 | (33\%) | 3 | (33\%) | 1 | (11\%) | 0 | (0\%) | 1 | (11\%) | 3.11 |
| 18. Amount you learned in the course | 1 (11\%) | 4 | (44\%) | 3 | (33\%) | 1 | (11\%) | 0 | (0\%) |  | (0\%) | 3.56 |
| 19. Relevance and usefulness of course content | 2 (22\%) | 3 | (33\%) | 2 | (22\%) | 1 | (11\%) | 0 | (0\%) |  | (11\%) | 3.33 |
| 20. Evaluative and grading techniques | 3 (33\%) | 5 | (56\%) | 0 | (0\%) | 1 | (11\%) | 0 | (0\%) | 0 | (0\%) | 4.11 |
| 21. Reasonableness of assigned work | 1 (11\%) | 4 | (44\%) |  | (11\%) |  | (11\%) | 0 | (0\%) | 2 | (22\%) | 2.89 |
| 22. Clarity of students' responsibilities/requirements | 3 (33\%) |  | (44\%) | 1 | (11\%) | 0 | (0\%) |  | (11\%) |  | (0\%) | 3.89 |


| Relative to other college courses you have taken | Much Higher |  |  |  |  |  | Average |  |  |  |  | Much Lower |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Do you expect your grade in this course to be: | 1 | (10\%) | 2 | (20\%) | 2 | (20\%) | 3 | (30\%) | 0 | (0\%) | 1 | (10\%) | 0 | (0\%) |
| 24. The intellectual challenge presented was: | 2 | (20\%) | 3 | (30\%) | 2 | (20\%) | 1 | (10\%) | 0 | (0\%) | 1 | (10\%) | 0 | (0\%) |
| 25. The amount of effort you put into this course was: | 0 | (0\%) | 2 | (20\%) | 6 | (70\%) | 0 | (0\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) |
| 26. The amount of effort to succeed in the course was: | 2 | (20\%) | 2 | (20\%) | 3 | (30\%) | 2 | (20\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) |
| 27. Your involvement in this course (asgn, atnd, etc) was: | 1 | (10\%) | 3 | (30\%) | 2 | (20\%) | 3 | (30\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) |


| 28. On average, how many <br> hours per week have you <br> spent on this course, <br> including attending classes, <br> readings, reviewing notes, <br> writing papers, and any other <br> course related work? |  |  |
| :--- | :--- | :--- |
| Under 2 | 0 | $(0 \%)$ |
| $3-4$ | 1 | $(11 \%)$ |
| $5-6$ | 6 | $(67 \%)$ |
| $7-8$ | 0 | $(0 \%)$ |
| $9-10$ | 1 | $(11 \%)$ |
| $11-12$ | 1 | $(11 \%)$ |
| $13-14$ | 0 | $(0 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 29. From the total average <br> hours above, how many do <br> you consider were valuable in <br> advancing your education? |  |  |
| :--- | :--- | :--- |
| Under 2 |  | 1 |
| (11\%) |  |  |
| $3-4$ | 3 | $(33 \%)$ |
| $5-6$ | 2 | $(22 \%)$ |
| $7-8$ | 1 | $(11 \%)$ |
| $9-10$ | 1 | $(11 \%)$ |
| $11-12$ | 1 | $(11 \%)$ |
| $13-14$ | 0 | $(0 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |
|  |  |  |


| 30. Expected Grade |  |  |
| :--- | :--- | :--- |
| A | 4 | $(44 \%)$ |
| B + | 2 | $(22 \%)$ |
| B | 3 | $(33 \%)$ |
| C + | 0 | $(0 \%)$ |
| C | 0 | $(0 \%)$ |
| D | 0 | $(0 \%)$ |
| F | 0 | $(0 \%)$ |
| S | 0 | $(0 \%)$ |
| NC | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 31.Course Was |  |  |
| :--- | :--- | :--- |
| In major | 9 | $(100 \%)$ |
| In minor | 0 | $(0 \%)$ |
| Dist. Req. | 0 | $(0 \%)$ |
| Elective | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 32.Class Composition |  |  |
| :--- | :--- | :--- |
| Fresh | 0 | $(0 \%)$ |
| Soph | $7 \quad(78 \%)$ |  |
| Junior | 2 | $(22 \%)$ |
| Senior | 0 | $(0 \%)$ |
| Grad | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 33. Wanted to take course |  |  |
| :--- | :--- | :--- |
| Yes | 6 | $(67 \%)$ |
| No | 1 | $(11 \%)$ |
| Neutral | 2 | $(22 \%)$ |

## Student Responses to Open Ended Questions

## Question \#1: Was this class intellectually stimulating? Did it stretch your thinking?

- Very much so. Being fairly unfamiliar with coding (besides EF 105), this class challenged me to think in ways I haven't before.
- I feel like I got a basic understanding of MATLAB, but I still don't completely know how to use the programing system
- Yes it was extremely difficult for me. Computer programming is not easily understandable for everyone. It doesn't come easy for me. I struggled the whole semester. If a student in this class doesn't completely understand how programming works entering the class, then there is nearly no hope. It takes way too much practice to understand in one short semester.
- The class was extremely stimulating. The problem solving ability required in this class was very high, and effectively kept my interest.
- Yes it was. Learned lots of new problem solving methods
- yes, most intellectually stimulating class I've ever been in.
- no

Question \#2: What aspects of this class contributed most to your learning?

- Every aspect. Projects and in class examples mostly. Practice exams were nice as well.
- The help from the TAs
- The multiple choice homework helped me learn some of the commands. I had to rely on these homeworks and memorizing the information outlined in the labs just to get by in this class.
- The extra help sessions.
- The examples and explanations on the website
- projects outside of class


## Question \#3: What aspects of this class detracted from your learning?

- Not much.
- The class time was not always used to understand the material
- The teachers moved way too fast. They would type out the code on the screen for everyone but they moved too fast and it was very difficult to follow what they were explaining. Their teaching style was too shallow and it didn't help me actually learn how all of the techniques actually work.
- none

Question \#4: What suggestions do you have for improving the class?

- Have more coding problems on the homework instead of multiple choice. The last couple of homeworks had coding, and it was very helpful.
- Have class three days a week to have a better understanding of what is going on
- They should higher TA's who actually understand how to help people. The TA's I had did not know how to actually teach a student a concept. They just kind of threw the information up on the screen and expected everyone to understand it. The TA's were useless.
- Either cut the class material in half or give students 4 credit hours for this class. It is extremely intensive to give only 2 credit hours for all the work necessary to succeed in the class.
- Add a recitation/make the class 3 hr credit.
- none
- Dont let the class be taught by TAs

| THE STUDENT ASSESSMENT OF INSTRUCTION SYSTEM <br> THE UNIVERSITY OF TENNESSEE |  |  |  |
| :---: | :---: | :---: | :---: |
| Engineering Fundamentals 230 | Sec \# 43422 (LEC) | William | chleter |
| Comp Solution/Engr Problems (LEC) | Fall 2013 | Form A | \# of Students: 14 |


| Questions | Excellent | Very Good | Good | Fair | Poor | Very Poor | Item Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Course as a whole | 1 (7\%) | 4 (29\%) | 3 (21\%) | 4 (29\%) | 2 (14\%) | 0 (0\%) | 2.86 |
| 2. Course content | 2 (14\%) | 3 (21\%) | 5 (36\%) | 2 (14\%) | 2 (14\%) | 0 (0\%) | 3.07 |
| 3. Instructor's contribution to the course | 2 (14\%) | 2 (14\%) | 3 (21\%) | 3 (21\%) | 2 (14\%) | 2 (14\%) | 2.50 |
| 4. Instructor's effectiveness in teaching material | 1 (7\%) | 3 (21\%) | 5 (36\%) | 2 (14\%) | 2 (14\%) | 1 (7\%) | 2.71 |
| 5. Course organization | 6 (43\%) | 3 (21\%) | 2 (14\%) | 2 (14\%) | 1 (7\%) | 0 (0\%) | 3.79 |
| 6. Clarity of instructor's voice | 2 (15\%) | 5 (38\%) | 2 (15\%) | 3 (23\%) | 1 (8\%) | 0 (0\%) | 3.31 |
| 7. Explanations by instructor | 2 (15\%) | 4 (31\%) | 2 (15\%) | 3 (23\%) | 1 (8\%) | 1 (8\%) | 3.00 |
| 8. Ability to present alternative explanations | 1 (7\%) | 2 (14\%) | 3 (21\%) | 6 (43\%) | 2 (14\%) | 0 (0\%) | 2.57 |
| 9. Use of examples and illustrations | 1 (7\%) | 5 (36\%) | 2 (14\%) | 4 (29\%) | 2 (14\%) | 0 (0\%) | 2.93 |
| 10. Quality of questions/problems raised by instructor | 2 (14\%) | 3 (21\%) | 3 (21\%) | 4 (29\%) | 2 (14\%) | 0 (0\%) | 2.93 |
| 11. Students' confidence in instructor's knowledge | 2 (14\%) | 6 (43\%) | 3 (21\%) | 2 (14\%) | 1 (7\%) | 0 (0\%) | 3.43 |
| 12. Instructor's enthusiasm | 3 (21\%) | 5 (36\%) | 3 (21\%) | 1 (7\%) | 2 (14\%) | 0 (0\%) | 3.43 |
| 13. Encouragement given to students' self expression | 2 (14\%) | 5 (36\%) | 3 (21\%) | 3 (21\%) | 1 (7\%) | 0 (0\%) | 3.29 |
| 14. Answers to students' questions | 3 (21\%) | 5 (36\%) | 2 (14\%) | 2 (14\%) | 2 (14\%) | 0 (0\%) | 3.36 |
| 15. Availability of extra help when needed | 7 (50\%) | 2 (14\%) | 2 (14\%) | 1 (7\%) | 2 (14\%) | 0 (0\%) | 3.79 |
| 16. Use of class time | 2 (15\%) | 3 (23\%) | 4 (31\%) | 3 (23\%) | 1 (8\%) | 0 (0\%) | 3.15 |
| 17. Interest in whether students learned | 3 (21\%) | 3 (21\%) | 3 (21\%) | 2 (14\%) | 3 (21\%) | 0 (0\%) | 3.07 |
| 18. Amount you learned in the course | 1 (7\%) | 3 (21\%) | 4 (29\%) | 3 (21\%) | 1 (7\%) | 2 (14\%) | 2.57 |
| 19. Relevance and usefulness of course content | 2 (14\%) | 1 (7\%) | 4 (29\%) | 5 (36\%) | 2 (14\%) | 0 (0\%) | 2.71 |
| 20. Evaluative and grading techniques | 4 (29\%) | 2 (14\%) | 3 (21\%) | 3 (21\%) | 2 (14\%) | 0 (0\%) | 3.21 |
| 21. Reasonableness of assigned work | 2 (14\%) | 4 (29\%) | 4 (29\%) | 1 (7\%) | 3 (21\%) | 0 (0\%) | 3.07 |
| 22. Clarity of students' responsibilities/requirements | 6 (43\%) | 2 (14\%) | 2 (14\%) | 1 (7\%) | 3 (21\%) | 0 (0\%) | 3.50 |


| Relative to other college courses you have taken | Much Higher |  |  |  |  |  | Average |  |  |  | Much Lower |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Do you expect your grade in this course to be: | 0 | (0\%) | 2 | (10\%) | 3 | (20\%) | 6 | (40\%) | 1 | (10\%) | 0 | (0\%) | 2 | (10\%) |
| 24. The intellectual challenge presented was: | 1 | (10\%) | 1 | (10\%) | 4 | (30\%) | 6 | (40\%) | 1 | (10\%) | 1 | (10\%) |  | (0\%) |
| 25. The amount of effort you put into this course was: | 2 | (10\%) | 1 | (10\%) | 4 | (30\%) | 6 | (40\%) | 1 | (10\%) | 0 | (0\%) |  | (0\%) |
| 26. The amount of effort to succeed in the course was: | 2 | (10\%) | 2 | (10\%) | 3 | (20\%) | 6 | (40\%) | 1 | (10\%) | 0 | (0\%) |  | (0\%) |
| 27. Your involvement in this course (asgn, atnd, etc) was: | 2 | (10\%) | 4 | (30\%) | 3 | (20\%) | 5 | (40\%) | 0 | (0\%) | 0 | (0\%) |  | (0\%) |


| 28. On average, how many <br> hours per week have you <br> spent on this course, <br> including attending classes, <br> readings, reviewing notes, <br> writing papers, and any other <br> course related work? |  |  |
| :--- | :--- | :--- |
| Under 2 | 0 | $(0 \%)$ |
| $3-4$ | 0 | $(0 \%)$ |
| $5-6$ | 7 | $(50 \%)$ |
| $7-8$ | 3 | $(21 \%)$ |
| $9-10$ | 1 | $(7 \%)$ |
| $11-12$ | 2 | $(14 \%)$ |
| $13-14$ | 1 | $(7 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 29. From the total average <br> hours above, how many do <br> you consider were valuable in <br> advancing your education? |  |  |
| :--- | :--- | :--- |
| Under 2 |  | 1 |
| $3-4$ | 7 | $(50 \%)$ |
| $5-6$ | 3 | $(21 \%)$ |
| $7-8$ | 1 | $(7 \%)$ |
| $9-10$ | 1 | $(7 \%)$ |
| $11-12$ | 0 | $(0 \%)$ |
| $13-14$ | 1 | $(7 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 30. Expected Grade |  |  |
| :--- | :--- | :--- |
| A | 7 | $(50 \%)$ |
| B + | 5 | $(36 \%)$ |
| B | 1 | $(7 \%)$ |
| C + | 0 | $(0 \%)$ |
| C | 0 | $(0 \%)$ |
| D | 1 | $(7 \%)$ |
| F | 0 | $(0 \%)$ |
| S | 0 | $(0 \%)$ |
| NC | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 31.Course Was |  |  |
| :--- | ---: | :--- |
| In major | 13 | $(93 \%)$ |
| In minor | 0 | $(0 \%)$ |
| Dist. Req. | 1 | $(7 \%)$ |
| Elective | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 32.Class Composition |  |  |
| :--- | ---: | :--- |
| Fresh | 0 | $(0 \%)$ |
| Soph | 11 | $(79 \%)$ |
| Junior | 3 | $(21 \%)$ |
| Senior | 0 | $(0 \%)$ |
| Grad | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 33. Wanted to take course |  |  |
| :--- | :---: | :--- |
| Yes | 8 | $(57 \%)$ |
| No | 5 | $(36 \%)$ |
| Neutral | 1 | $(7 \%)$ |


| Student Responses to Open Ended Questions |
| :--- |
| Question \#1: Was this class intellectually stimulating? Did it stretch your thinking? |
| - I had a TA named Morgan Helton. I understand that in this class we're supposed to be learning another language, but we're not all graduate students. He |
| expects us to understand the vocabulary after he maybe skims over certain definitions maybe once, he asks us if we understand but there is no point in |
| asking him to help because, unless you already understand it, he doesn't seem to care much about offering useful answers. He seems to take pride in his |
| own knowledge quite a bit, but as far as I'm concerned, I really don't care how smart he is. His job is to relate this stuff to both people who have seen this |
| stuff before and people who have not. Horrible. Miles Smith was cool though, and I'm sure Schleter was fine. |


| Question \#3: What aspects of this class detracted from your learning? |
| :--- | :--- |
| - Morgan Helton |
| - homework problems and projects utilizing commands not covered in class |
| - TA's |
| - One of my GTA's was a smartelic so i didn't quite like asking him question because you never knew how he would respond. He made this class somewhat |
| unenjoyable. |
| - the fact that we had to do all of this stuff that we weren't taught |
| - Slowness |
| - lectures weren't that great |
| - nothing really |
| - The lack of good material to read about MatLab was discouraging. Yes, the Mathworks website helped sometimes, but often the pages are written in a very |
| complicated and unrelevant(to our assignments) way with very few examples. |

## Question \#4: What suggestions do you have for improving the class?

- TAs who re not electrical engineering majors
- Not so arrogant TAs
- I would get rid of the GTA that was a jerk.
- make the projects a little closer to what's going on in class or give more help or something.
- Make one for advanced programmers
- use lectures better
- nothing
- Provide more information about using MatLab.

| THE STUDENT ASSESSMENT OF INSTRUCTION SYSTEMTHE UNIVERSITY OF TENNESSEE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Engineering Fundamentals 230 | Sec \# 46049 (LEC) | William | hleter |  |
| Comp Solution/Engr Problems (LEC) | Fall 2013 | Form A | \# of Students: 8 |  |


| Questions | Excellent |  | Very Good |  | Good |  | Fair |  | Poor |  | Very Poor |  | Item Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Course as a whole | 2 | (25\%) | 2 | (25\%) | 3 | (38\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 3.62 |
| 2. Course content | 2 | (25\%) | 1 | (12\%) | 3 | (38\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 3.38 |
| 3. Instructor's contribution to the course | 4 | (50\%) | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.25 |
| 4. Instructor's effectiveness in teaching material | 1 | (12\%) | 5 | (62\%) | 1 | (12\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 3.75 |
| 5. Course organization | 4 | (50\%) | 2 | (25\%) | 0 | (0\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 4.00 |
| 6. Clarity of instructor's voice | 5 | (62\%) | 2 | (25\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.50 |
| 7. Explanations by instructor | 4 | (50\%) | 1 | (12\%) | 3 | (38\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.12 |
| 8. Ability to present alternative explanations | 4 | (50\%) | 1 | (12\%) | 3 | (38\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.12 |
| 9. Use of examples and illustrations | 3 | (38\%) | 3 | (38\%) | 2 | (25\%) |  | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.12 |
| 10. Quality of questions/problems raised by instructor | 2 | (25\%) | 2 | (25\%) | 4 | (50\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 3.75 |
| 11. Students' confidence in instructor's knowledge | 6 | (75\%) | 1 | (12\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.62 |
| 12. Instructor's enthusiasm | 6 | (75\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.75 |
| 13. Encouragement given to students' self expression | 6 | (75\%) | 1 | (12\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.62 |
| 14. Answers to students' questions | 4 | (57\%) | 2 | (29\%) | 1 | (14\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.43 |
| 15. Availability of extra help when needed | 3 | (38\%) | 4 | (50\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.25 |
| 16. Use of class time | 2 | (25\%) | 4 | (50\%) | 2 | (25\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.00 |
| 17. Interest in whether students learned | 3 | (38\%) | 4 | (50\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.25 |
| 18. Amount you learned in the course | 3 | (38\%) | 2 | (25\%) | 3 | (38\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) | 4.00 |
| 19. Relevance and usefulness of course content | 3 | (38\%) | 1 | (12\%) | 2 | (25\%) | 2 | (25\%) | 0 | (0\%) | - | (0\%) | 3.62 |
| 20. Evaluative and grading techniques | 2 | (25\%) | 2 | (25\%) | 3 | (38\%) | 1 | (12\%) | 0 | (0\%) | 0 | (0\%) | 3.62 |
| 21. Reasonableness of assigned work | 1 | (12\%) | 1 | (12\%) | 4 | (50\%) | 1 | (12\%) | 1 | (12\%) | 0 | (0\%) | 3.00 |
| 22. Clarity of students' responsibilities/requirements |  | (12\%) | 3 | (38\%) | 4 | (50\%) | 0 | (0\%) |  | (0\%) | 0 | (0\%) | 3.62 |


| Relative to other college courses you have taken | Much Higher |  |  |  |  |  | Average |  |  |  | Much Lower |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Do you expect your grade in this course to be: | 1 | (10\%) | 1 | (10\%) | 1 | (10\%) | 2 | (20\%) | 3 | (40\%) | 0 | (0\%) | 0 | (0\%) |
| 24. The intellectual challenge presented was: | 2 | (20\%) | 3 | (40\%) | 2 | (20\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) |
| 25. The amount of effort you put into this course was: | 1 | (10\%) | 4 | (50\%) | 2 | (20\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) |
| 26. The amount of effort to succeed in the course was: | 1 | (10\%) | 3 | (40\%) | 3 | (40\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) |
| 27. Your involvement in this course (asgn, atnd, etc) was: | 3 | (40\%) | 0 | (0\%) | 4 | (50\%) | 1 | (10\%) | 0 | (0\%) | 0 | (0\%) |  | (0\%) |


| 28. On average, how many <br> hours per week have you <br> spent on this course, <br> including attending classes, <br> readings, reviewing notes, <br> writing papers, and any other <br> course related work? |  |
| :--- | :--- |
| Under 2 | 0 |
| $3-4$ | $(0 \%)$ |
| $5-6$ | 0 |
| $70 \%)$ |  |
| $7-8$ | 3 |$(38 \%)$

$\left.\begin{array}{|lll|}\hline \begin{array}{l}\text { 29. }\end{array} \text { From the total average } \\ \text { hours above, how many do } \\ \text { you consider were valuable in } \\ \text { advancing your education? }\end{array}\right]$

| 30. Expected Grade |  |  |
| :--- | :--- | :--- |
| A | 4 | $(50 \%)$ |
| B + | 1 | $(12 \%)$ |
| B | 2 | $(25 \%)$ |
| C + | 0 | $(0 \%)$ |
| C | 1 | $(12 \%)$ |
| D | 0 | $(0 \%)$ |
| F | 0 | $(0 \%)$ |
| S | 0 | $(0 \%)$ |
| NC | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 31.Course Was |  |  |
| :--- | :--- | :--- |
| In major | 7 | $(88 \%)$ |
| In minor | 0 | $(0 \%)$ |
| Dist. Req. | 1 | $(12 \%)$ |
| Elective | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 32.Class Composition |  |  |
| :--- | :--- | :--- |
| Fresh | 0 | $(0 \%)$ |
| Soph | $8 \quad(100 \%)$ |  |
| Junior | $0 \quad(0 \%)$ |  |
| Senior | 0 | $(0 \%)$ |
| Grad | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 33. Wanted to take course |  |  |
| :--- | :---: | :--- |
| Yes | 5 | $(62 \%)$ |
| No | 3 | $(38 \%)$ |
| Neutral | 0 | $(0 \%)$ |

## Student Responses to Open Ended Questions

## Question \#1: Was this class intellectually stimulating? Did it stretch your thinking?

- This class was challenging because it made you think about how to approach problem solving on the computer. I feel like sometimes the class was almost a little too challenging, requiring us to solve problems we had never looked at before. The point of this was to teach us how to look things up in the help file of Mat-Lab or whatever program we were using, which I think is very beneficial and it is a skill we should have, but because Mat-Lab does not have a very good help file it was often difficult to do this, especially when there was a time constraint. The grading was sometimes incredibly harsh, and since the grade cut offs were very high this sometimes meant you were straddling the line between an A and a B or a B and a C, which is very stressful. However, I have learned quite a bit in this class and often find myself thinking..."If only I had Mat-Lab I could put this equation in a loop and solve this problem quickly..." which makes me proud that I would be able to at least understand a program in Mat-Lab that could solve for this. I am so glad Mat-Lab has helped me think like this because I was terribly bad at computers before this class and now I feel like I have a general understanding of how a computer program is written and how I might be able to use a computer program in the future.
- Yes
- This class was stimulating. This class required me to approach each problem at a step-by-step level basis. I was able to see all of the "moving parts" of a problem and how it flowed.
- Very much so


## Question \#2: What aspects of this class contributed most to your learning?

- I really liked that in this class they gave you projects in which you had to implement Mat-Lab in different ways and use what you learned in class to solve a problem. I feel that struggling through the projects on my own helped me learn and understand how to solve a problem. I was glad they encouraged you to get help from the TAs, the professor, and other students while still having to write your own programs when you were stuck or unsure of what you had to do. It really helped me learn what we were doing in class so much better. I think that when the projects were due before the tests it helped me learn the material for the test. It was also very nice that my teachers were always willing to help me figure out a problem, whether it was just a simple typo or if I had caused Mat-Lab to crash. Professor Schleter and Taylor Morris taught my section and they were so very helpful and very nice and really explained things very well. I am so glad they were my teachers for this course because I felt that they helped me understand Mat-Lab to the best of my abilities. Professor Schleter was so very nice, and was always willing to answer questions, and would always listen to our concerns, and was very very helpful in explaining and teaching. I think he is an awesome professor and I really enjoy going to his class. It is challenging but rewarding!
- Seeing examples of how the functions and processes worked
- Learning through doing--i.e. working through the examples--helped me the most.
- The breakdown of problems into manageable pieces that can be solved one piece at a time.
- Homework and projects


## Question \#3: What aspects of this class detracted from your learning?

- I really wish that the rubrics for the projects were clearly defined... oftentimes the requirements seemed hidden and hard to find in the project description. The TAs often graded differently, causing grades to be different from person to person. This would keep students from seeing how serious a mistake was. From what I heard from my friends sometimes only one or two points was counted off of a mistake that may have altered the entire program, and sometimes several points were counted off for not lining up some columns in formatted output perfectly straight, for example. I feel like Mat-Lab programming is not for everyone, some people understand Mat-Lab a lot better than others. For me, I feel like I often know what I want my problem to do, I just don't know HOW to write my code so Mat-Lab does exactly what I want it to do. I may have a general idea, like I know I have to extract the numbers out of a matrix that are greater than 100, and I know I need a loop and some indexing, I just don't know how exactly to index so I get numbers greater than 100 out. I think the instructors need to take this into consideration when grading.
- The class is boring. I'm sorry but it was really hard to pay attention. It also seemed like we moved really quickly over some aspects, like the details of how things worked as well as their inputs and what exactly they output.
- Sometimes I found it hard to follow lecture. It would often move too fast for me to process the information as code it by myself on my computer at the same time. Instructors were good teachers overall though.
- Staring at a computer for so long, it's hard to remain attentive after a while and after much frustration.
- None


## Question \#4: What suggestions do you have for improving the class?

- I think that this class is a very beneficial class and I really enjoyed going to it; however, I feel like the grading needs to be more consistent and consideration needs to be taken into account that we may understand what we need to do we just don't always understand how to do it. I also think that offering some extra credit would ease some peoples' minds about their grades. For my class the only way I know of getting extra credit was making an outstanding plot in the first project that everyone in the class liked. The person with the most votes got extra credit. I think that was very good but there was no way of a student doing an extra homework assignment or going to optional classes or help sessions or filling out surveys about Mat-Lab to give him extra credit like their was in EF 151 and 152. I don't think extra credit should be given out but I feel that if it was offered it would be very beneficial for some students and ease their minds a little about their grades. Overall I think this was a great course and it was very beneficial. I feel like I will be using it a lot in the future. And I am very glad Professor Schleter is teaching it. He is a wonderful teacher and is very knowledgeable about Mat-Lab! I really enjoyed his class!
- The project work seemed a little excessive for the fact that this is a two hour course.
- Emphasis on working through problems/examples together, step-by-step breaking it down slowly.
- None, it's been made about as bearable as possible. Except maybe project work help, we could have used a lot more.. or maybe a recitation period like all of the EF 151 and 152. Those always helped me out.
- Although I understand the effectiveness of learning through struggling through trial and error, but I feel as though some of the small aspects in projects could have been addressed before starting them to alleviate much of the unnecessary long nights of frustration.

| THE STUDENT ASSESSMENT OF INSTRUCTION SYSTEMTHE UNIVERSITY OF TENNESSEE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Engineering Fundamentals 230 | Sec \# 48624 (LEC) | William | hleter |  |
| Comp Solution/Engr Problems (LEC) | Fall 2013 | Form A | \# of Students: 12 |  |


| Questions | Excellent | Very Good | Good |  | Fair |  | Poor | Very Poor | Item Mean |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Course as a whole | 0 (0\%) | 1 (8\%) | 5 (42\%) | 2 | (17\%) | 2 | (17\%) | 2 (17\%) | 2.08 |
| 2. Course content | 0 (0\%) | 2 (17\%) | 4 (33\%) | 4 | (33\%) | 1 | (8\%) | 1 (8\%) | 2.42 |
| 3. Instructor's contribution to the course | 1 (8\%) | 2 (17\%) | 3 (25\%) | 2 | (17\%) | 3 | (25\%) | 1 (8\%) | 2.42 |
| 4. Instructor's effectiveness in teaching material | 1 (8\%) | 2 (17\%) | 4 (33\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.50 |
| 5. Course organization | 1 (8\%) | 3 (25\%) | 3 (25\%) | 2 | (17\%) | 2 | (17\%) | 1 (8\%) | 2.67 |
| 6. Clarity of instructor's voice | 1 (8\%) | 5 (42\%) | 2 (17\%) | 2 | (17\%) | 1 | (8\%) | 1 (8\%) | 3.00 |
| 7. Explanations by instructor | 0 (0\%) | 4 (33\%) | 3 (25\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.50 |
| 8. Ability to present alternative explanations | 1 (8\%) | 3 (25\%) | 3 (25\%) | 1 | (8\%) | 2 | (17\%) | 2 (17\%) | 2.50 |
| 9. Use of examples and illustrations | 1 (8\%) | 5 (42\%) | 1 (8\%) | 2 | (17\%) | 2 | (17\%) | 1 (8\%) | 2.83 |
| 10. Quality of questions/problems raised by instructor | 1 (8\%) | 2 (17\%) | 4 (33\%) | 2 | (17\%) | 2 | (17\%) | 1 (8\%) | 2.58 |
| 11. Students' confidence in instructor's knowledge | 2 (18\%) | 3 (27\%) | 3 (27\%) | 1 | (9\%) | 1 | (9\%) | 1 (9\%) | 3.09 |
| 12. Instructor's enthusiasm | 1 (8\%) | 5 (42\%) | 2 (17\%) | 2 | (17\%) | 0 | (0\%) | 2 (17\%) | 2.92 |
| 13. Encouragement given to students' self expression | 1 (8\%) | 3 (25\%) | 3 (25\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.58 |
| 14. Answers to students' questions | 1 (8\%) | 4 (33\%) | 2 (17\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.67 |
| 15. Availability of extra help when needed | 2 (17\%) | 3 (25\%) | 2 (17\%) | 3 | (25\%) | 0 | (0\%) | 2 (17\%) | 2.83 |
| 16. Use of class time | 1 (8\%) | 2 (17\%) | 4 (33\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.50 |
| 17. Interest in whether students learned | 1 (8\%) | 1 (8\%) | 5 (42\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.42 |
| 18. Amount you learned in the course | 2 (17\%) | 1 (8\%) | 3 (25\%) | 3 | (25\%) | 1 | (8\%) | 2 (17\%) | 2.50 |
| 19. Relevance and usefulness of course content | 1 (8\%) | 2 (17\%) | 4 (33\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.50 |
| 20. Evaluative and grading techniques | 1 (8\%) | 3 (25\%) | 3 (25\%) | 2 | (17\%) | 1 | (8\%) | 2 (17\%) | 2.58 |
| 21. Reasonableness of assigned work | 1 (8\%) | 2 (17\%) | 3 (25\%) | 2 | (17\%) | 2 | (17\%) | 2 (17\%) | 2.33 |
| 22. Clarity of students' responsibilities/requirements | 1 (8\%) | 3 (25\%) | 2 (17\%) | 4 | (33\%) | 1 | (8\%) | 1 (8\%) | 2.67 |


| Relative to other college courses you have taken | Much Higher |  |  |  |  | Average |  |  |  |  |  | Much Lower |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23. Do you expect your grade in this course to be: | 0 (0\%) | 0 | (0\%) | 3 | (20\%) | 5 | (40\%) | 1 | (10\%) | 1 | (10\%) | 2 | (20\%) |
| 24. The intellectual challenge presented was: | 3 (20\%) | 3 | (20\%) | 3 | (20\%) | 2 | (20\%) | 0 | (0\%) | 0 | (0\%) | 1 | (10\%) |
| 25. The amount of effort you put into this course was: | 3 (20\%) | 1 | (10\%) | 5 | (40\%) | 1 | (10\%) | 1 | (10\%) | 0 | (0\%) |  | (10\%) |
| 26. The amount of effort to succeed in the course was: | 3 (20\%) | 4 | (30\%) | 3 | (20\%) | 2 | (20\%) | 0 | (0\%) | 0 | (0\%) | 0 | (0\%) |
| 27. Your involvement in this course (asgn, atnd, etc) was: | 3 (20\%) | 1 | (10\%) | 5 | (40\%) | 2 | (20\%) | 1 | (10\%) | 0 | (0\%) |  | (0\%) |


| 28. On average, how many <br> hours per week have you <br> spent on this course, <br> including attending classes, <br> readings, reviewing notes, <br> writing papers, and any other <br> course related work? |  |  |
| :--- | :--- | :--- |
| Under 2 0 $(0 \%)$ <br> $3-4$ 1 $(8 \%)$ <br> $5-6$ 1 $(8 \%)$ <br> $7-8$ 4 $(33 \%)$ <br> $9-10$ 3 $(25 \%)$ <br> $11-12$ 1 $(8 \%)$ <br> $13-14$ 1 $(8 \%)$ <br> $15-16$ 1 $(8 \%)$ <br> $17-18$ 0 $(0 \%)$ <br> $19-20$ 0 $(0 \%)$ <br> $21-22$ 0 $(0 \%)$ <br> 22 or $>$ 0 $(0 \%)$$>$ |  |  |


| 29. From the total average <br> hours above, how many do <br> you consider were valuable in <br> advancing your education? |  |  |
| :--- | :--- | :--- |
| Under 2 |  | $2 \quad(17 \%)$ |
| $3-4$ | 3 | $(25 \%)$ |
| $5-6$ | 2 | $(17 \%)$ |
| $7-8$ | 3 | $(25 \%)$ |
| $9-10$ | 2 | $(17 \%)$ |
| $11-12$ | 0 | $(0 \%)$ |
| $13-14$ | 0 | $(0 \%)$ |
| $15-16$ | 0 | $(0 \%)$ |
| $17-18$ | 0 | $(0 \%)$ |
| $19-20$ | 0 | $(0 \%)$ |
| $21-22$ | 0 | $(0 \%)$ |
| 22 or $>$ | 0 | $(0 \%)$ |


| 30. Expected Grade |  |  |
| :--- | :--- | :--- |
| A | 2 | $(17 \%)$ |
| B + | 2 | $(17 \%)$ |
| B | 4 | $(33 \%)$ |
| C + | 2 | $(17 \%)$ |
| C | 2 | $(17 \%)$ |
| D | 0 | $(0 \%)$ |
| F | 0 | $(0 \%)$ |
| S | 0 | $(0 \%)$ |
| NC | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 31.Course Was |  |  |
| :--- | :--- | :--- |
| In major | 9 | $(75 \%)$ |
| In minor | 0 | $(0 \%)$ |
| Dist. Req. | 3 | $(25 \%)$ |
| Elective | 0 | $(0 \%)$ |
| Other | 0 | $(0 \%)$ |


| 32.Class Composition |  |  |
| :--- | :--- | :--- |
| Fresh | 0 | $(0 \%)$ |
| Soph | 9 | $(75 \%)$ |
| Junior | 2 | $(17 \%)$ |
| Senior | 0 | $(0 \%)$ |
| Grad | 0 | $(0 \%)$ |
| Other | 1 | $(8 \%)$ |


| 33. Wanted to take course |  |  |
| :--- | ---: | :--- |
| Yes | 7 | $(58 \%)$ |
| No | 2 | $(17 \%)$ |
| Neutral | 3 | $(25 \%)$ |


| Student Responses to Open Ended Questions |
| :--- | :--- |
| Question \#1: Was this class intellectually stimulating? Did it stretch your thinking? |
| • Having never really programmed in my life this class was quite a challenge. I did not get all my questions answered and I am still very confused about the |
| whole class. |
| - yes, very. I learned a lot. |
| - yes it was! |
| - yes, programing is a very cool skill to have, it allows you to make this website for instance.. |
| - Yes, the c |
| - yes |
| - for someone who is not into computers, I tried really hard in this class. It did not stretch my thinking as it was a program used to do things we already |
| know how to do but in a different way |

## Question \#2: What aspects of this class contributed most to your learning?

- The in class assignments.
- Mostly the projects. They were incredibly time-consuming, but it was the best way to learn, second to minor programming for the homework.
- The materials are very useful
- explanations of how commands operate
- The projects, while time consuming, were good for learning and understanding the material
- at home learning
- I learned how to better use a certain computer program


## Question \#3: What aspects of this class detracted from your learning?

- The T.A.'s I did not feel as though they did a very good job teaching the material. I feel the professor was more than helpful though.
- The TA's were incredibly patient and knowledgeable, but sometimes to jovial.
- N/A
- the lack of a textbook or manual for the program.
- none
- the TA's don't help
- The amount of work that was required for a TWO CREDIT CLASS was completely overkill. 4 projects 5 exams(including the final) and two homeworks/ week were a bit much when each project required more time than the last with the most time being close to 20 hrs put into it and a low B on the assignment grade. The shear discouragement from the amount of work was overwhelming.
- The notes are scattered and hard to follow. Every single class I've taken in the last 3 years has had a powerpoint except for this one (and this is one of the only ones that could really benefit from one). On the homework, I encountered question after question, week by week, about material that was not taught in class or available in the online notes. When I asked about these questions, I was merely told what the answer was and not to worry about it, only to see the material from the questions as a part of the required work in assignments. If you missed one line of code and the TAs scrolled past it there was no way to recover. I plan on writing more in a separate line of communication.

Question \#4: What suggestions do you have for improving the class?

- Better T.A.'s.
- One less project would have been nice, and test to for that matter. The last test and project conflicted terribly with my other class loads.
- N/A
- get a manual or textbook students can learn on their own from and this class would be perfect
- none
- better organization and better TA's
- If you were to take functions and sub functions, you could spend a great deal more of the class working on these. Taking one class for an idea that would be used for nearly every other graded assignment was on the low side. We need to spend more time on this LEARNING it. And for god's sake, cut the projects down preferably to none. Save functions, these projects went FAR above and beyond the complexity of the material taught. The vast majority of the things used for the project were not covered at all in the course.
- This class needs a complete rework. When I have time (hopefully over winter break) I will make a rundown of the many things I believe this course needs. This course is incredibly important to any engineering major who will be dealing with any sort of programming and I think it is being severely overlooked and under taught.

