## Lab Evaluation Comments

<table>
<thead>
<tr>
<th>Lab Evaluations</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The lab manual/notes adequately describe equipment and experiments. If not, please help us identify problems.</td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>2. The lab experiments are reasonable in length and content. If not, how can we change it?</td>
<td>3</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3. The lab experiments follow the lecture material. If not please explain.</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>1</td>
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<tr>
<td>4. The performance of the lab instructors is satisfactory. If not, how can they improve it.</td>
<td>2</td>
<td>9</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5. The lab equipment is functional. If not, please explain.</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6. The lab is well equipped. If not, what do you think is missing.</td>
<td>2</td>
<td>7</td>
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<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

### 1. The lab manual/notes adequately describe equipment and experiments. If not, please help us identify problems.
1. Controls lab needs to be updated. Some of the equipment did not work. Thermal lab also had problems with equipment.
2. The manuals or notes were written with fully functional equipment and the equipment was usually broken.
3. Fluids and controls need help.

### 2. The lab experiments are reasonable in length and content. If not, how can we change it?
1. During some of the labs, there was a lot of sitting around and waiting for the machine that we needed as only a few students could use the specific machine at a time. (Mostly in the fluids lab).
2. Mechanicals need their separate fluids lab. The content also doesn’t always go with the lecture.
3. The lab experiments follow the lecture material. If not, please explain.
   1. Some labs (fluids) do not match with the mechanical’s fluid class.
   2. I have had lab sessions where the class would be a topic behind the lab class.
   3. Depends on lab. Fluids lab had nothing to do with ME 380 lecture. Materials lab closely followed lecture.
   4. Occasionally the lab would get ahead of the lecture, but the lab instructors usually did a good job of briefly explaining the material to us.

4. The performance of the lab instructor satisfactory. If not, how can they improve it?
   1. Varies depending on the lab TA.
   2. Fluids lab had many broken.
   3. In two different lab classes, the lab instructor did not hand back any labs.
   4. Overall the lab instructors did a good job.
   5. It seems like most of the lab instructors don’t want to be there either.

5. The lab equipment functional. If not, please explain.
   1. A few labs had broken equipment pushing back a lab experiment.
   2. Couple of problems with thermodynamics’ lab equipment. Same for automatic controls.
   3. Heat transfer lab and measurements lab, experiments were postponed due to broken equipment.
   4. I am not sure on some of the equipment if it was the instructor or the equipment. The pendulum in controls lab did not work. The thermal lab with the steam turbine cannot measure mass flow rate.
   5. Most of the time the lab equipment worked. However, the wind tunnel in the fluids lab was broken and I was looking forward to doing that lab.
   6. Usually it was broken or not working properly. We had to adjust results for it.

6. The lab is well equipped. If not, what do you think is missing?
   1. The labs had the equipment that we needed.
   2. More space for all students to fit and see the GA’s demonstration or lecture.

**Strongest & Weakest**

**Strongest:**

1. Many teachers have great accessibility, opportunity to do undergraduate research.
3. When the lecture material actually coincided with the lab it reinforced the lecture.
4. The department did a good job of detailing what classes the students need to take. The course flow chart and check lists for a specific catalogue were exceptionally helpful. However, not everyone was able to follow the flow chart.
5. I think the strongest aspect of the program is professor availability and student interaction.
7. Raises leaders, gives a good load of feasible responsibilities to its employees (engineers).
8. A few great professors.
9. Computer lab in A311 offers all the software needed for all classes. Professors are very approachable.
10. Great professors who are truly concerned with the success of each student.
11. Engineering students graduate and undergraduates, form a close knit group. Each student is open to helping each other out concerning engineering problems even if they are not in same class.
12. Taught me how to think like an engineer. Breaking down systems and analyzing them.
13. This program places great emphasis on its students. As a small program, students receive the attention they need to excel academically.

**Weakest:**

1. No clear guidance.
2. HVAC, Manufacturing, Nuclear
3. Some of the professors didn’t seem to care about the student’s education. They were just there to teach and not help.
4. Teaching the students the computer programs (i.e. MatLab and MathCad)
   a. I feel like the MatLab Lab (ME 330L) was mostly useless. The instructor wrote on the board what commands we were supposed to use. A one credit course is not sufficient enough to teach the students how to use MatLab, especially since most of the classes after 330 highly require the of MatLab, especially Numerical Methods (ME 402). I felt like I spent more time in Numerical Methods teaching myself MatLab and trying to make MatLab perform correctly than trying to solve the homework problems.
   b. Class Times
      i. There were many times that class times would interfere with internship/ job hours. I realize that there is no way to accommodate everyone, but it seemed that having classes start in the middle of the day was useless. Class times would start at 8:00 and range until 3:00, making it very difficult if not impossible to work for a few hours on any given day. Also there were a bunch of conflicts with classes being at the same time.
   c. Classes offered every other semester
      i. I hated that some classes, especially prerequisites classes, were offered only one semester during the scholastic year. If for some reason there was a conflict and you couldn’t take it one semester, you had to wait a year and that could push back graduation.
5. Not enough graduate classes offered relating to graduate catalog. More funding for better and state of the art equipment.
6. Limited number of classes both times and selection or electives.
7. Not good at reassuring the interns that they are approved to stay another semester. A couple of interns fell through the cracks.
9. Lab equipment. It doesn’t always work. Lab structure. Labs rarely follow the lecture.
10. How students are assigned with an advisor to help them choose what classes to take.
11. We need more hands on experience. In my entire college career, I have only built two items. The first one was a Lego robot for ME 100 class and the second one was a senior design project.
12. It would be nice to have more “high-tech” exposure. (Nanotechnology, etc.)

**Other Comments:**

1. Poor reputation at local high schools and middle schools.