

**DEPARTMENT OF MECHANICAL ENGINEERING, IUPUI
FACULTY FEEDBACK FORM FOR COURSE OUTCOMES SURVEYS**

Note: This form is to be completed and submitted to the department by instructors at the end of each semester based on the survey results of courses taught. It is designed to monitor student learning, keep track of progress and changes made in the program, and allow faculty reflect upon the results. The survey results may be viewed from the department's survey database at <http://www.engr.iupui.edu/me/assessment/fsurveys.shtml>. The completed form is to be emailed to cwooton@iupui.edu (*note: first save the file locally, then email as an attachment*).

Course: ENGR 197	2007	Spring
Nancy Lamm	4.10/3.67	4.0

1. List the outcomes that did not meet the Department's current threshold of 3.75 out of 5.0 and explain the reasons. If all or most outcomes in your course are equal to or above 3.75, please reflect upon on the lowest two or three. Please state the outcomes as fully as possible, as in the course outcomes list, with the numbers same as on the list.

There were two sections taught with identical methods, but results varied widely. In the first section all outcomes were above 3.75. In the other, 5 outcomes were below 3.75. Except for outcome 7 results, however, the outcomes ranked lower in one section were lower in the other section as well.

1. Develop algorithms using a step-by-step process. (3.9/3.55) Although we do require and use pseudocode and flowcharting on a couple of assignments, they are not required on most assignments. When I discuss approaches to a problem I do not specifically say that this is algorithm development.
5. Use one and two-dimensional arrays in structured C programs. (3.81/3.60) Arrays are covered near the end of the semester and are one of our more difficult topics.
7. Write user-defined functions in C programming language. (4.24/3.45) Apparently the students in the first section mastered functions much better than those in the second section. All assignments after week 4 require functions, so we certainly are doing lots of practice.
8. Use pass by value and pass by address to exchange data between calling and called functions in C programs (3.81/3.55). The scores on this outcome may reflect difficulty that students have with using pointers as function parameters. Furthermore, it reflects the difficulty of students in the second class with functions in general.
9. Write computer programs in C programming language to solve introductory engineering-related problems. (3.90/3.15). I try to write some programming assignments with engineering applications, but many are mathematical applications. The text is a computer science text (chosen by the ECE department), so the programs in the text are not engineering problems.

2. Were there any changes made to the course during the semester? If so, explain.

Other than writing new assignments and class exercises, particularly in the area of functions, there were no notable changes. I continue to increase the time spent on group work and active learning in the class.

3. Are there any recommendations for improvement?

A new text, perhaps with less detail and more engineering problems, would be helpful. More intentional work on algorithm development is desirable.

4. Additional reflections/suggestions for assessment?

Outcome averages for this class have been around 4.0 for several years. This is a much more difficult class for students than ENGR 196 and much out-of-class time is required to help students with programs. Because of expectations of the ECE department, the scope and depth of the class cannot be reduced. Removing MATLAB from the class has helped to give more time to work on a single language.

Please email to Courtney Wooton at cwooton@iupui.edu. Thanks.