

Week 5_Motivation of Students

Problem: The course is a large freshman course divided up into 3 engineering disciplines (Bioengineering, Electrical Engineering, and Mechanical Engineering) with 3 separate faculty members. Since the two sections are 120+ students each, we divide the students into groups of about 40 so that they rotate through each faculty twice for a total of 4 weeks in each engineering discipline. Some students in my Intro to Engineering course seem to want to get through the course with little effort and some don't even bother to show up to class. However absences in general seem to be high. One reason could be that the class is large so students feel that they can miss class and "not be missed," which is true the only way I know that they are in my section is through an attendance sheet sign up. I have not learned the names of the 240-250 students this semester, which would be related to the course climate discussion of last week. Also, some students may not find that it is useful to learn anything from another discipline if they have decided to major in another discipline, for example, a student may wish to study civil engineering and not see the point in doing anything in bioengineering.

Possible solutions: I have redesigned the Bioengineering portion of the course to include more lab experiments that students perform in teams and less lecture time. I feel that students would rather 'do' than 'hear' about the discipline. I also started a bioengineering design project, where the students are given a problem statement – usually involving an assistive device need, and they work in their teams to come up with two solutions and write a short report describing their solutions and discussing any limitations. I think that the more open-ended problems using issues that can employ solutions using knowledge from other disciplines (maybe not civil engineering) is more interesting and of value to students.

I should probably make more of an effort to learn names too, but that has always been a problem for me.