

Course: Statics (Fall 2013)

- Student motivation problem:

I have a couple of concerns in my sections. First is the loner student who sits in the corner away from all the other students and does not freely choose to participate in group work during class. I have to ask him from time to time to work with students nearby and he does so, but not willingly. He is very quiet yet quite intelligent based on his individual work. He dresses in all black most of the time and has mentioned his affinity for Goth dress. The other is the student who puts very little effort into class. Again a better than average student, but he turns in work late, sometimes does not come to class and seems genuinely disinterested in most of the concepts. He came to engineering technology from mechanical engineering, and in some ways I discern that he seems to lack motivation because the courses are not challenging enough (for him).

- Active learning engagement methods.

- a) Connect concepts to real world problems (relevance); I have posed two problems in class that use real world or current discussion topics as means to connect material. One, a blog posting on our course page, had dozens of comments from students.
- b) Discuss the use of these tools in design and engineering. I discuss the use of statics in future courses and how the tools will benefit them during senior design.
- c) I talk about the need to practice the skills. Two students have shown that my discussion of doing practice problems was beneficial. Their grades have improved significantly now that they do targeted practice of problem solving methods outside of class.
- d) I hold study sessions outside of class. I do not come with an agenda for these sessions, but answer student questions about material and concepts. Typically done the week before exams are given.
- e) Students are asked to summarize problems solved as a means of critical thinking. I ask them to evaluate the answer obtained, other methods to solve the problem, discuss issues they have with the material and solution techniques. This helps me to make adjustments to increase student success without sacrificing level of the content.
- f) Offer team assignments (labs) where students work together in clusters.