SUMMARY OF TEACHING ACTIVITIES: FALL 2001

Statement of Teaching Activities

In Fall 2001, my first semester as a faculty member at K-State, I was assigned to teach Physical World – I. All of my teaching experience in the past had been in smaller classes, thus I was both excited and apprehensive about teaching a large lecture class.

I began by consulting with faculty members who had taught the class before to get a sense of the type of students I could expect and strategies that I could adopt to teach the class effectively. All of the faculty members whom I talked with (Amit Chakrabarti, Itzik Ben-Itzhak, Tim Bolton and Dean Zollman) shared their experiences with me gave me several useful strategies, as well as copies of their syllabi and exams. All of this information was invaluable in helping me plan and execute my teaching in this course. I was also able to incorporate several strategies and ideas that I have learned through my work in physics education research with varying degrees of success.

First, I encouraged students to participate actively in lectures by constant use of the Personal Response System in the classroom. By posing questions to the students and having them respond over the PRS, I could gauge the level of student understanding as a topic was introduced. I also felt that this method encouraged students to think actively and remain attentive during the class. My experience in this class indicates that this strategy was a mixed success. While it did get students to respond, it was not quite as effective in improving attendance. Of course, I had no way of comparing attendance with and without the system. Attendance was typically only about 75%. Of those present, not everybody responded. Students had to share the transmitters so it was hard to tell how many were actually responding, however typically about 50 responses would be recorded, which, assuming that two students shared a transmitter would correspond to a response rate of about 70% of those present in class. I anticipate that both the attendance as well as the response rate would have risen remarkably if this had counted for a part of their grade, and perhaps that is one of the things that I would do differently if I teach the class again.

Another important aspect of the course was the extensive use of K-State Online. Students were required to use K-State Online to take weekly homework. All of my lectures (using PowerPoint) were placed on the Web, along with weekly summaries. I found K-State Online to be quite beneficial in many ways. First, it was easy for me to communicate with the students, and to get feedback from them continually about the class. I got to know more students through my online interaction with them than I would through face-to-face interaction in a class of this size. I was initially concerned about their familiarity with the technology, but they proved to be more technologically savvy than I had expected. I was also concerned about cheating and plagiarism in answering homework questions, but the homework grades were not significantly higher than what I would have expected if I had assigned paper-and-pencil homework. Most students that I talked to told me that they liked the use of K-State Online in the course. I gave out a survey in the last week of class (in addition to the TEVAL) to specifically gauge student response to the use of K-State Online. I have not yet analyzed the results of this survey, and I will inform the faculty of these when I do so.

There are some things that I would continue if I taught the class again, such as the use of the PRS, K-State Online, and lecture demonstrations but there are others that I would reconsider. For instance, I used PowerPoint while lecturing. While this helped me be organized as a lecturer, at times I felt constrained by the lack of spontaneity.

Overall, the class was a good learning experience for me, and hopefully for my students too!

I would like to thank the following faculty members for their useful advice in teaching this course (listed alphabetically by last name): Itzik Ben-Itzhak, Tim Bolton, Amit Chakrabarti, and Dean Zollman.

Thanks are also due to Peter Nelson and Mark Newman for their invaluable help in suggesting and setting up lecture demonstrations, often with very little notice.