

Statement of Teaching Philosophy

Dr. Tim Chamillard

One of the guiding factors of my interactions with students, both in and out of the classroom, is that the student is ultimately responsible for their own learning. As a professor, I have a responsibility to help students gain an understanding of the material and applications of that material. This doesn't mean, however, that I should simply provide answers to student questions. I require that students with questions take the responsibility to research those questions on their own (at least in the textbook and other class materials); if that research doesn't lead them to a solution, we engage in a dialogue to guide them to an answer. If I can teach students how to discover answers on their own, I've given them capabilities they can use well past the end of a particular course.

A related aspect of my teaching style is that I recognize that on many occasions there is no right answer to a particular problem. There are numerous times in my classroom when my response to a student question is "It depends"! We then discuss, of course, what criteria should be used to select the best solution from our alternatives. I believe that it's important to convey to students that the logical evaluation process is critical to developing good problem-solving skills. This is particularly true in my graduate-level software engineering classes, where I regularly challenge my students with incompletely-specified, open-ended problems. Although many students are uncomfortable with these problems, practicing software engineers have to make decisions based on incomplete – and even incorrect! – information all the time. By taking this approach, I can help students hone their skills facing this kind of problem in an academic setting before they have to face them on the job.

I use a variety of techniques to motivate my students. The easiest technique is to convey enthusiasm for the course topics. Most of my enthusiasm comes from my love of teaching, but my enthusiasm also comes from recognition of the technical and societal implications of computer science topics. In most cases, students become enthusiastic in response to my very active lecture and discussion style. The use of examples from real life also provides a source of motivation; associating topics from the classroom with either current events or my professional experiences helps show the students why the topics being covered are useful and important.

An important characteristic of effective teaching at the college level is the use of research results to enhance the student learning experience. Computer Science Education is one of my primary research areas; my work in this area focuses on research that provides useful teaching, advising, and curriculum development techniques to computer science educators. I then use the results from this research to continuously work on improving my teaching approach. As is true with any such attempts, not all of my improvement ideas are successful, but I would much rather try new ideas and approaches in an attempt to keep improving as a teacher than never try something new out of fear that it won't work. I constantly push my students to extend themselves beyond their comfort zone as they face new experiences, so it's only fair to do the same to myself!

In addition to trying new teaching approaches in my classes, I'm also very interested in innovating at a curricular level. Two years ago, I introduced a freshman-level course in which the students create computer games without having to program. This unique course has been very successful in its first two offerings, and students leave the course even more motivated to continue as computer science students. I've now developed a new Game Design and Development Minor as a team effort with one of my department colleagues. The new minor will give students an opportunity to explore this highly motivational domain in even more depth – and will also require that I stretch my teaching capabilities yet again to offer effective educational experiences in the courses in the minor.

I've also started a new distance learning program called Comp Sci Online, which lets students participate in courses through distance learning mechanisms rather than traditional classroom attendance. Starting in Spring 2005, we're offering all the core Master of Engineering in Software Engineering classes through the program, and over 35% of my students this semester are enrolled in Comp Sci Online. Some of the issues I've faced planning for and implementing this program have been outside my prior experience, but the benefits to the students make the program well worth the extra effort required for me to make it a success.

To summarize, my teaching philosophy boils down to three key goals: to always challenge my students to excel and expand their capabilities; to always challenge myself to do the same in my teaching, using my computer science education research to support my improvement efforts; and to constantly explore and implement exciting new curriculum innovations.