

# PHILOSOPHY OF TEACHING

The most important thing we can teach our students is to learn how to learn and to do so with enthusiasm and joy. Because of the dramatic and constant change in the field of computing, computer science students must understand that their profession will demand lifelong learning. They must have the tools to teach themselves. And they must have the interest and desire to stay current in their discipline.

These goals can be met by requiring a solid theoretical background and providing intellectually challenging exercises in a variety of computing environments. Beginners are served best through highly structured assignments and closed labs where they can receive encouragement and individualized attention. Advanced students should be encouraged to explore independently via open-ended assignments and simple research projects. Exposure to a wide variety of technologies promotes the flexibility necessary for success in this field.

I believe that good teaching involves innovation and some degree of risk. Although well-structured assignments with measurable results are necessary for evaluating student achievement, assignments where the results are neither known nor predictable are more representative of life after graduation and are invaluable learning experiences. Assignments of this nature are often uncomfortable for students (and teachers!) since the chance of failure is higher. I believe that the process of investigation is of great importance and that students should be provided with an environment in which is okay to take risks and to fail occasionally. My students constantly surprise me with the degree to which they succeed at very difficult tasks.

I make a clear distinction between the study of computer science and training people to use computers. To equate the study of computer science with skills training is to overlook the important aspects of problem solving, logic, experimentation, planning and design. As a consequence, even when I teach non-majors, my goals are for students not only to become comfortable with using computers, but also to be able to easily learn to use similar computer systems and software -- in short, to learn how to learn to use computers.

In summary, my philosophy of teaching is one in which I encourage students to become independent learners. I emphasize the rate of change in the field of computing and the need for lifelong learning. My students learn how to competently approach and solve problems. I see them as people who will often apply their computing skills to other disciplines and I insist that they be able to communicate effectively. I require them to form good work habits and to respect others. I provide my students with opportunities to experiment and to practice what they have learned. And I encourage them to have fun.