

## **TEACHING STATEMENT**

### **MY VISION OF TEACHING**

I believe that the purpose of teaching is to expedite the learning process and develop a comprehensive knowledge base for more effective learning. In the modern age, knowledge is widely accessible from different sources such as books, television and, most recently, the Web. However, the teaching profession is not obsolete. When students come into a class, what they expect is to learn something that will take much more time if they learn it by themselves. So teaching should not be a simple repetition of what already is in the book. It should be an intelligent process that requires the active involvement of both the teacher and the students.

From my own experience as a student, I found that learning is most effective when one understands the underlying principles rather than memorizing all the details. However, the principles are not always clearly written. Through teaching, I want to help my students to organize the information and discover the relationships among the knowledge that they have learned. More importantly, I want my students to eventually develop their own methodology for knowledge discovery and organization, including strong analytical and critical-thinking skills. One effective way to achieve this goal is to let students practice problem solving through course projects. My role in such a process should be a collaborator and a guider rather than a teacher.

I believe that, to be a good teacher, one must first gain a good understanding of the course material from the perspective of a student. Through a careful preparation, key points and difficult parts could be identified and focused on in lectures. Moreover, Computer Science is a young and active discipline that is changing constantly. New applications and technologies emerge everyday. I must keep learning and incorporate new knowledge into the teaching material.

A teacher should try his/her best to understand the nature of each course – theoretical or practical. Through my teaching experience, I found that it is usually more difficult to teach a theoretical course than a practical one because of the abstract nature of the former. A common question from my students was why we need that. In such a case, a clear explanation of the background and motivation is needed. It is also helpful by engaging students into group discussion and letting them realize the importance by themselves. In the meantime, I will serve as a participant of the discussion and guide my students to the right conclusion.

It is important to understand students in a class through frequent communications. I found that the motivations for learning are often different for different student groups. For example, strict disciplines are usually needed for freshmen. It is a teacher's responsibility to help them in a smooth

transition from a high school mindset into a college one. On the other hand, senior level students are often well motivated and more disciplined. In such a case, more time should be spent in preparing them for their future career. My experience with WebCT shows that computer-aided courseware is also quite helpful in facilitating teacher-student communications.

A good teacher should also help his/her students to learn what it means to be responsible and ethical as a future professional in the area of Computer Science. I want my students to respect and value the opinions of others. Through teaching, I also expect my students to understand the bigger picture about the role that Computer Science plays in other academic disciplines and in everyday lives.

As a beginner in an academic career, my view on teaching and learning will certainly evolve with time. The practice of teaching itself is an interesting and challenging learning process for me. I shall always incorporate into my teaching what I have learned from my experience.

## **TEACHING PLAN**

I have taught a number of undergraduate and graduate-level courses in Computer Science (CS) at the University of Central Oklahoma and the Michigan State University. My work has been highly complimented by my students (see CV). Holding Ph.D., M.S and B.S. degrees all in CS, I am well prepared to teach all undergraduate-level CS courses and related mathematics courses, such as Discrete Mathematics, Statistics and Linear Algebra. Even though I am able to teach all graduate-level CS courses, to utilize my expertise to the best, I will prefer to teaching graduate-level courses in the areas of advanced database technologies, including information retrieval, data mining, computer vision and multimedia systems.