Teaching Statement

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[**Teaching Philosophy**] I enjoy teaching. I believe a good teacher should be a good learner, a good presenter, and a good leader. Being a good learner means a teacher is good at acquiring new knowledge, so that the teacher can not only keep the class updated with new concepts and technologies, but also help to improve the learning capabilities of students. This is particularly important to information and computer sciences, an area that is rapidly advancing. In addition, a teacher must be able to clearly explain concepts and ideas to students. Supplementary class materials such as slides and readings are necessary for this purpose. More importantly, the teacher should make teaching an interactive process and encourage students to think independently. Finally, a teacher is also a leader in the sense that the teacher leads students to complete a learning process. Grade is an effective encouragement mechanism, but it should not become the only goal for students.

[**Teaching Experience**] I worked as an instructor, and independently taught a 10-week class (21 students enrolled) during my Ph.D. study at University of California, Irvine. The students were third and fourth year undergraduates in the school of information and computer sciences at UC Irvine. In this class, we covered a couple of software methodologies (object-oriented design, configuration management, etc.) and tools (Eclipse, Subversion, JUnit, etc.). In addition to regular lectures, I prepared lab sessions where students could use the tools to work on some pedagogical examples. For each of these tools, I not only taught students how to use it, but also explained the underlying design and architecture of the tool. The purpose was to encourage students to really think about design rationales, and further their understandings of the tools. I also invited some other Ph.D. students to the class and give a presentation about their own research areas. In this way, I wanted the students to be aware of the evolving process of software engineering. The result of the class was positive based on the students' performance and the course evaluation that they provided at the end of the quarter. The class website is still available at http://www.ics.uci.edu/~zhengy/inf111/.

[**Teaching Interests**] I think software engineering education should closely follow the development of information technology, such as computer networks and multi-core programming. Software engineering is mainly about producing software with the help of tools and process support. At this point, software systems - a significant portion of information technology - represent direct products of software development. Meanwhile, both software and hardware systems can be exploited to facilitate the production of new software. Therefore, keeping up with current technology in software engineering education not only helps students understand advanced software products, but also makes them aware of available technical resources that may be used during this process. In the future, I would like to continue to teach software engineering courses. In particular, I am interested in teaching courses that are based on new technologies, such as distributed software architecture, coordinated software engineering, and software traceability. On the one hand, I have more than two years' experience of either teaching or TAing software engineering courses at UC Irvine. I am familiar with the structure and contents of current courses. On the other hand, I have been doing research in the area of software engineering for more than four years, and I am looking forward to bringing first-hand research results to students.