Teaching statement

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Courses I would like to teach. My teaching philosophy centers on the search for the best venues of communication with each student, while striking the right balance between fairness, firmness, and friendliness. My in-class teaching combines standard techniques, such as blackboard presentations, with modern methods, such as slide presentations, software demonstrations, or online discussions. These techniques are constantly improved by careful incorporation of student feedback. I have an extensive teaching experience as a teaching assistant, a head teaching assistant overseeing six teaching assistants as well as a (substitute) course instructor at Cornell University. My teaching has been recognized with an Outstanding Graduate Teaching Assistant Award for TAing BTRY 408, a core probability class for undergraduate students majoring in Biometry. The combination between my teaching experience and my research interests allows me to teach a variety of courses including Applied Statistics, Probability Theory, Multilevel Models, Time Series, Computational Statistics, Statistical Learning and Data Mining.

My teaching style. My primary teaching responsibility is to pass my knowledge and expertise in Statistics and Data analysis to my students. First, I acknowledge the diversity of students and the need for a multi-threaded approach to teaching. Thus, some students may respond better to lecturing, or to a working group environment, or by participating in question and answer sessions, or by working on a project. Finding and honing students' skills and helping them find their interests is both challenging and rewarding. I am passionately pursuing creative ways of accomplishing this wonderful task. Second, when I explain a new topic I emphasize key ideas and concepts and repeat them from various perspectives. For instance, the graphical representation of a method and its interaction with data is typically a good start; a well designed example either before or after the methods description is also helpful. Third, I believe that students should be actively engaged in the learning process. Thus, I invite and welcome questions during lectures; also ask for students' feedback during office hours and individual meetings. Fourth, I encourage team work, whenever it is appropriate. Finally, I strongly believe that analyzing data should be a vital part of the learning experience. For example, computer software for visual exploration of data is fully incorporated in my teaching process. Statistical packages such as R, Matlab, and SAS help illustrate statistical phenomena and empower students to explore new methods and think critically about their strengths and limitations.

Teaching applied courses. There is no better way to teach an applied class than by fully embracing analysis of real-life data sets. There is now a myriad of exciting data sets coming from different applications. A great example is the Kaggle web-site (www.kaggle.com), but there are many other sources. In such a course I would help students understand the various stages of data analysis including cleaning, structuring and

visual exploration of "raw" data as well as choosing appropriate statistical techniques. Moreover, I complement the discussion of a new statistical method or procedure with a case study based on a real-world data set.

Teaching theoretical courses. In a theory class, I actively engage students to derive the results with me. Therefore, classroom interaction with students is extremely important for me. Engaging students to be pro active and help with the theoretical developments may improve both class participation and increase the level of the academic discourse. Through simple questions I monitor the level of understanding of students, while making sure that the flow of ideas remains logical and smooth. I use examples to illustrate some of the harder concepts, but never forget to also provide very challenging bonus homework problems.

Monitoring students progress and getting feedback. One of the most important things that I do as a professor is to get to know the students and their backgrounds. While hard for larger classes, I try to remember everybody's first name. In general I strive to make students be comfortable talking to me, sharing their concerns, and participating as full partners in their education.To closely monitor the progress of students weekly or biweekly quizzes can be given. Based on these quizzes, I can quickly tailor my teaching style and make necessary adjustments along the way. Such an approach may, however, be stressful for some students and some may not perform in a fast pace quizzing environment. Thus, I also encourage direct feedback from students. To overcome the natural shyness of some students I repeatedly express my willingness to talk to them. I also try to pair students with teaching assistants with whom they are more comfortable communicating. Lastly, during each lecture I ask a few simple, engaging questions to evaluate how closely students follow the material. I also continuously encourage students to ask questions. Asking for anonymous feedback is an alternative tool that may be useful, especially when criticism can be turned into better lecture material or style of delivery.

Grading Policy. Establishing a fair and clear grading policy at the beginning of the class is a must. Setting the rules at the beginning of the term and keeping them unchanged is an important component of my teaching approach.