

Robert A. Beeler

150 Ligon Street, #1002

Clemson, SC 29631

<http://people.clemson.edu/~rbeeler/mypage.html>

Cell: (865) 603-1131

Home: (864) 653-8639

Work: (864) 654-5196

Email: rbeeler@clemson.edu

Statement of Teaching

Over the past seven years, I have had a broad range of teaching experiences in the mathematical sciences at four institutions. I served as a Peer Tutor for the Department of Services for Students with Disabilities at Pellissippi State Technical Community College from January 1999 to August 2000. While rewarding, I was often challenged to find inventive ways of presenting material to students that learned differently than I. My next experience was working in the Math Tutorial Center at the University of Tennessee from August 2000 to August 2001. Here, I helped a large number of students in a variety low-level math courses. Because a student could come in with a basic algebra problem or a more difficult multivariable calculus problem, I was forced to keep my skills sharp and be able to explain mathematical concepts to students at different ability levels. When I began my Master's degree at the University of Tennessee, I accepted an assistantship that allowed me to gain additional experience. While here, I received a year of training while teaching recitation sections of College Algebra and Business Calculus, under the supervision of a more experienced instructor.

This year of training helped me to teach my first class at Clemson University and to quickly progress with Business Calculus, Calculus I, and Calculus II. Since these classes are completely standardized, the syllabi tend to be inflexible and extensive. As such, I learned to conduct the class in a timely manner. Test problems in these classes were written via committee, with other instructors contributing problems and suggestions. Because the grading of these tests was also standardized, I needed to be very careful to emphasize certain points in class and to ensure that the construction and grading of my daily assignments was consistent with the department standards.

While at Clemson, I spent some time as an Adjunct Instructor at Tri-County Technical College, a nearby two-year institution, where I taught Intermediate Algebra and College Algebra. This was a valuable experience because I was allowed to construct my own exams and work with students who were generally older than what I was used to.

All of these experiences helped to shape my teaching philosophy. I believe that is essential that departmental standards be maintained and improved upon. I have seen too many students fail a class because they lacked a mastery of the prerequisites. As such I give

students a basic skills test and encourage students to return to a lower course if they fail to make above a certain grade. Also, I use a short amount of class time to review certain key concepts, before they are needed in class. On occasion, I even use these key concepts as the sole basis for a quiz. This helps to ensure that students have mastered the content of a course, before moving forward. I believe that it is equally important to retain a sense of compassion for the students. As such, I believe it is important to look at factors beyond the numerical average to determine the students' final grade, especially in borderline cases. Some factors that I consider include attendance, participation, improvement over the course of the semester, and whether the students have any extenuating circumstances. In short, if I am to increase a student's grade, I want to see that they have done everything in their power to achieve that grade.

Because I expect a lot from my students, I must expect even more from myself. I view teaching as a competitive act, and it is my responsibility to ensure that I get my fair share of the students' time. This entails basic civilities such as saying "hello," smiling, and learning their names. I also employ frequent daily assignments, such as group exercises and quizzes. I have found that the approach of group exercises is a very effective tool for learning. First, these seem to be less stressful for the students. Second, this requires the student to be an active participant in class, rather than a passive observer of the lecture material. Finally, when I gave individual quizzes in-class, the time would essentially be wasted for those who were ill-prepared. With group quizzes, there is a chance that they might learn something. This is not without cost however, as the test is an individual effort. I frequently warn them that if they are relying too much on their group, the test may not go well for them. I also give a number of individual assignments to compensate for the group work. I encourage class participation in other ways, for example, I often prompt the class for the next step in an example. The effectiveness of my teaching strategy can be seen in successful students, high teaching evaluations, and my 2004 Award for Excellence in Teaching.

I am highly qualified to teach any number of classes at your institution. Besides my expertise in Graph Theory and Discrete Mathematics in general, my training at Clemson would enable me to teach a variety of courses. In addition to the depth courses, Clemson requires two graduate courses from each of six areas: Abstract Algebra, Analysis, Operations Research, Statistics, Computing, and Stochastics. As such, I have experience in a number of mathematical areas beyond my specialization.