TEACHING STATEMENT

ROBERT OSBURN

As a graduate student at Louisiana State University, I taught thirteen introductory courses with audiences of varying mathematical abilities. The excitement of teaching came from conveying to students that they were capable of doing mathematics. In the introductory courses, the emphasis was on understanding basic rules, working many examples and completing continuous assessment. I believe this practice gives students a foundation of skills and the confidence to improve mathematically. While at Louisiana State University, I received two certificates of teaching excellence and was awarded the David Oxley Memorial graduate student teaching award. This award is given annually to one senior graduate student to recognize continued excellence in teaching.

As the difficulty level of a course increases, I pose questions with more depth. As a postdoctoral fellow at McMaster University, I was fortunate to teach three graduate courses and one upper level course in Abstract Algebra. Lectures and review sessions were wonderful opportunities to see students master abstract mathematical ideas. The objective was to invite further research thereby giving students the sense that mathematics is an ongoing process of discovery.

As a postdoc at Queen’s University, I taught two courses with large enrollments. It was a welcome challenge to stand in front of three hundred students and convince them of the beauty of mathematics. The students enjoyed both discussing ideas that led to the main concepts of each lecture and working examples that illustrated these concepts. The aim was to involve them in a conversation. Their questions and comments formed a crucial part of the discussion that was consistently maintained throughout the term. From this experience, I learned the importance of encouraging communication with students during and after class.

As a tenured lecturer at University College Dublin, I taught fifteen courses in subjects ranging from Optimization in Finance and first year Calculus to Vector Calculus via Differential Forms and Algebraic Number Theory. I believe that it is important for research intensive faculty members to teach a balance of undergraduate (in particular, first year) and graduate courses. Students should see mathematical concepts presented in a clear, concise and enthusiastic manner by a researcher who is excited about their subject!

I have consistently earned student evaluations substantially above the course mean. This feedback is essential to my teaching success. For me, teaching is about working with students to achieve a common goal. The following example typifies this belief.

Mary was a student in my Math 10040 course during the first semester of 2010. This challenging first year course introduces students to mathematical proofs and number theory. She was struggling after the first exam. I saw the mistakes she was making. They were not conceptual, but minor mistakes. I encouraged her to stay in the class and keep working. She understood that my words were not a guarantee of success and I believed in her potential. Her grades improved and, at the end of the semester, she obtained one of the highest grades on the final exam and an A− in the course.