Experiencing Mathematics Through Writing  
MATH189  
Fall 2007 Syllabus  
Matt Noonan

Philosophy

This is a course for writing about mathematics. Unfortunately, you probably have never tried to do any mathematics before! It certainly isn’t taught in any standard high school or college curriculum. The good news is: mathematical thinking is part of the human experience, and there is no such thing as a person who “just can’t do math”. In learning how to write about mathematics, we will also learn how to create mathematics. You will write about mathematics both as an outside observer and as a mathematician.

Don’t worry, it’ll be fun.

Class.

Class starts at 8:40 in the morning, every Tuesday and Thursday. I know, I know. Eat breakfast before you come, it will make you feel a hundred times better during class. If you don’t drink coffee, now is a good time to start.

It is very important that you attend and participate fully in each class. This doesn’t mean just showing up, but being awake and ready to engage in some mind-bending material or some convoluted arguing with your classmates. The classes are discussion-based, and we can’t have a discussion without you!

Beyond discussion, the classes will involve some peer review of your work. This is a critical step in ensuring that your writing is clear and comprehensible to others. It would be a shame miss it!

Class participation and peer-review will correspond to a third of your grade in the course.
Office Hours

I will have regularly scheduled open office hours each week. During this time, you can drop by with any questions about the readings or the math that we are doing, ask for help with writing or outlining an argument, or bring up any concerns you have with the class. We will set the time of these office hours sometime in the first week in order to fit as many student’s schedules as possible.

Beyond the open office hours, we will also regularly set up one-on-one or small group meetings to analyze and improve your writing. You may also email me questions at any time.

Reading List.

Most of the readings for this course will come from these books, which you should get from the bookstore as soon as possible:

1. *Flatland*, Edwin A. Abbott
   ISBN 0-7382-0541-0

2. *The Shape of Space*, Jeffrey R. Weeks

3. *Innumeracy*, John Allen Paulos


5. *The Mathematical Experience*, Philip J. Davis and Reuben Hersh

6. *A Mathematician’s Apology*, G. H. Hardy
   ISBN 0-521-42706-1

There will also be supplementary readings and excerpts from articles throughout the semester – these are just as important as book assignments.

Little Assignments

About half of your assignments will be small writing exercises – papers a few pages long, responses to articles or chapters of a book, expansions of arguments from class, outlines of larger papers, or expositions of mathematical
ideas. These will make up a third of your grade in the course. You should expect to be at least working on a reading assignment and a small writing assignment at any given time. Small writing assignments will be due in the next class or occasionally by email at some earlier time. It is important that you get these assignments in on time, since the class cannot move forward without your participation. The small assignments will constitute a third of your total grade.

**Big Assignments**

Beyond the little assignments, there will be two large papers due by the end of the semester, accounting in total for a third of your grade. One will involve creative writing along the lines of *Flatland* or *The Shape of Space*. We will start discussing this paper in the second class, and begin work on it soon after. The second assignment will begin roughly halfway into the semester and will involve a critical evaluation and exposition on some aspect of the mathematical experience. Keep this in mind during our classroom discussions and, when a topic in discussion catches your interest, file it away as a potential thesis topic for this paper.

In each of these assignments you will go through several stages of planning, writing, peer evaluation, and revision. Your work in these stages is as important as the final product.

**Contact Information.**

You can email any questions or concerns to me at noonan@math.cornell.edu. I will generally respond within a few hours, unless I am asleep or traveling.