

Math 401 – Senior Seminar – Course Policies

PROFESSOR: Tommy Ratliff, Science Center 106b, x3968
EMAIL: tratliff@wheatoncollege.edu
HOME PAGE: <http://acunix.wheatoncollege.edu/tratliff/>
OFFICE HOURS: Monday: 3:30 – 4:30
Tuesday: 1:30 – 2:30
Wednesday: 3:30 – 4:30
Friday: 9:30 – 10:30
And by appointment (Really!)

Overview

This course will be structured somewhat differently than most, if not all, of the math courses you have taken so far in your career. We will not follow a textbook or even have a predetermined set of content that we will cover. Instead, you will each work on an independent project on a topic of your own choosing and present your work to the class each week in informal chalkboard talks.

To get started on your project, you should pick a paper that explores a topic that is related to, but not covered in, a previous course you have taken. This will provide an opportunity to investigate an area from a previous semester in more depth. The paper will serve as a starting point for your explorations, but I expect you to move beyond this paper and use additional references as well. I can, of course, give you some help in finding an appropriate paper.

We will spend the first two weeks of the course discussing “Counting on Continued Fractions” (*Mathematics Magazine*, Volume 73, No. 2, April 2000 by Arthur Benjamin, Francis Su, and Jennifer Quinn). This will give you some experience reading non-textbook material while you are searching for your own topic. The remainder of the semester will be structured as a seminar where you present your work to the class and ask questions of the other students about their work. This will both reinforce your own understanding and allow you to learn about the other students’ projects. The semester will culminate with a major paper and a half-hour presentation that will be open to the public.

There are two other main requirements for the semester. First, you will write a reflection paper on your mathematics experience at Wheaton; I’ll give more specific information about this later in the semester. Second, you will each give a 15 minute presentation on your topic at the Hudson River Undergraduate Mathematics Conference on April 8 at Westfield State College. This is the best attended undergraduate math conference in the nation, usually drawing 400 or more students annually.

I think we’ll all learn a lot from each other. This is going to be a really fun semester.

Evaluation

Your final grade will be determined by

Final Paper	25%
Final Presentation	25%
Class Participation	20%
HRUMC Presentation	10%
Reflection Paper	10%

Some Important Dates

- February 8 Paper for project selected
- February 15 One page proposal for project due
- February 20 Reflection Paper due
- February 24 Abstracts due for HRUMC

- March 8 Outline of Final Paper due
- March 20 Outline of HRUMC talk due
- March 27 Guest lecture by Ron Graham

- April 8 HRUMC at Westfield State (notice this is a Saturday)
- April 17 Final Paper for peer review due
- April 19 Outline of Final Presentation due
- April 24 Final Paper due

- Week of May 1 Final Presentations