

Number Theory (E12.2101) 194 Mercer Rm 308  
Fall 2011 Emily Mines emily\_susan@yahoo.com

**Text:** Mathematics for High School Teachers, An Advanced Perspective Usiskin, et al, Prentice Hall

**Grading:**

There will be:

- Two In class tests: 30% each
- One final exam 30%
- Participation and Classwork 10%

**Important Dates:**

Changes to the regular schedule: We have 13 class meetings (including in-class tests). We meet consecutively on Thursdays at 6:45-8:25 with these exceptions:

**September 30:** I have open parent night at work- CLASS CANCELLED

**November 25:** Thanksgiving- NO CLASS

**December 14:** NYU follows a Thursday schedule on this particular Tuesday. CLASS HELD TUESDAY INSTEAD OF THURSDAY.

Exams:

**October 14:** In Class Exam 1. This will be our 5<sup>th</sup> meeting, so expect it would cover at least the first 3 meetings' worth.

**November 18:** In Class Exam 2. This will be our 10<sup>th</sup> meeting, so expect it would cover at least the first 8 meetings' worth.

**December 16:** Final Exam. This is during our normal class time. It is the first night of Exam week. \*\*\*\*\*PLEASE NOTE THAT THIS MEANS WE MEET 2 TIMES IN ONE WEEK as we will be meeting the Tuesday immediately before this.\*\*\*\*\*

**What this class covers:**

This course covers geometry and related *content*. This means the course covers material you would actually be expected to teach one day. There is a follow up course on "how to teach geometry", and this course does not address specific pedagogical methods---it's covering what you would be spending nights learning before planning lessons if you don't remember your HS geometry really well.

**Topics will include:**

- Axiomatic Systems & Logic
- Euclidean Axioms, similarity, congruence, CPCTAC, statements/reasons (T-proofs)
- Transformational geometry
- Cartesian Geometry Transformations and Proofs
- Theorems about Triangles
- Theorems about Quadrilaterals
- Theorems about Circles
- Locus and Constructions

We will hopefully get to most of this. There is not a strict calendar but communication will be good about what is expected and when.

**Other:****Blackboard:**

As I am situated far from NYU and visit only during our class time, I will be relying heavily on Blackboard. Please be sure your account is in good order as you will need to access this regularly.

Please be sure to check the following sections of Blackboard **weekly**:

- *Course Information*: I will announce things here. Typically, if I wish to communicate some news, I will email the class this same announcement.
- *Course Documents*: I will often post notes from class, or attach other documents which were used in class, or which may serve as reference.
- *Assignments*: I will post hw problem sets, any resources related to them, and in some cases solutions here.
- *External Links*: Websites which I believe may be helpful or relevant will be here.

**Attendance:**

You should come to class each week. If you have a legitimate reason for your knowing in advance that you will be absent, please let me know, preferably by email.

**Contacting me/Questions:**

I do not have office hours. If given advanced notice, I may be able to stick around after class sometimes. I will be answering questions about homework in one of two ways:

- At the start of class, particularly if there is a problem that many struggled with.
- By email with the following caveat:
  - I will make a point of spending time online answering questions on Tuesday afternoons between about 4 and 6. If you wish to ask me questions, I can email you back by around 6 pm that day.
  - I may spend some time Thursday afternoons but any lengthy questions are unlikely to be answered.