MATH 406 Fall 2007

Instructor: Kathryn Truman
Email: rendke@math.umd.edu
Office: Math 1113
Office Hours: MWF 2:00-2:30PM

Course Web Page: `http://www.math.umd.edu/~rendke/math406/`

Classroom and Time: MTH 0303, 1:00-1:50 (MWF)

Text: Elementary Number Theory 6$^{\text{th}}$ed. David M. Burton, ISBN: 0-07-305188-8

Prerequisites: Math 141 (Calculus II)

Math 406 is an introduction to number theory. Number Theory is one of the most beautiful and elegant areas of mathematics. It also happens to be useful.

Through this course I hope to convey a little bit of both the elegance and the usefulness of number theory as well as introduce you to basic proof techniques. You will be expected to read, understand, and do proofs in this course. If you are not yet comfortable with proofs you will be by the end of the semester.

To really learn mathematics you need to do mathematics, so you will be expected to work on problem sets. You should also read the material from the text before each class.

Grading:

Three 1 hour Exams (100 pts each)	300 pts
Homework	100 pts
Quizzes	100 pts
Final (Cumulative)	200 pts
Total	**700 pts**

I expect to give grades based on cutoffs of 90%, 80%, 70%, and 60%. There will be no curving during the semester. **IF** any curving is done it will be only for the course totals and the final grades.

Make-up exam and quiz policy: Exam or Quiz makeups will only be given for University Excused Absences. Any student with a valid reason to be excused from an exam must contact me prior to the exam, either by email or by phone (leave a message at 301.405.5047), and present documentation at the next class session attended. If you need to be excused for a religious observance, you should let me know as soon as possible, but in any case no later than the end of the schedule adjustment period.

There will be approximately 10 homework sets spaced out over the semester. In each homework set there will be problems that you are required to turn in and other suggested problems. Quiz and exam questions will be similar if not identical to homework questions (including the suggested problems). The back of the text has answers to many odd questions

and there are solutions to essentially all of the odd questions in the student solution manual. I reserve the right to give unannounced quizzes and make changes in the syllabus that I feel are necessary. These changes will be announce in class and posted to the website. It is advisable to keep up with class work and attend class regularly. Extra help is available during my office hours.

Chapters and sections to be covered (tentative):
I intend to cover essentially all of the text book and possibly some supplemental material on Gaussian Integers. I hope to hand out a detailed schedule a week or so into the semester.

Exam 1:
Chapter 1 - Chapter 4 and Chapter 14
Exam 2:
Chapter 5 - Chapter 8 and Chapter 10
Exam 3:
Chapter 9, Chapter 11 - Chapter 13, Chapter 15, and any supplemental material
Final:
Cumulative - so all material covered

Honor Code: You should be familiar with the University's policies on Academic Integrity, including the Honor Pledge. In this course: you are cheating on homework if you copy someone else's work. It is fine though to have someone explain a problem to you, or show you her work – you just have to write a solution from your own understanding, without simply copying.