Math 324: Algebraic Number Theory
Spring 2017

Basic Course Information

Instructor: Prof. Jen Paulhus
Time and Location: MWF 2:00-2:50 PM in 2245 Noyce Science Center
Office Hours: M: 10-11AM, T: 1:30-3PM, W: 11AM-12PM, F:10:30-11:30AM
Office: 2519 Noyce Science Center
e-mail: paulhus@math.grinnell.edu
webpage: `http://www.math.grinnell.edu/~paulhusj/teaching/ma324s17.html`
Text: *Introductory Algebraic Number Theory*, Alaca and Williams
           Elementary Number Theory: An Algebraic Approach, Bolker

Material Covered: We will cover many sections in Alaca and Williams. We will use Bolker as a reference for elementary number theory results.

Grading Policies

Homework: Homework assignments will be posted on the class PWeb page. Homework assignments will be due *at the beginning* of class most Wednesdays. However, if you LATEX your assignment (and you are in class that day), you may submit the assignment before 7 PM on PWeb without a late penalty. Late homeworks will drop one full letter grade for each day they are late (counting weekends). So if you turn in a handwritten assignment at the end of the day on Wednesday, your grade on that assignment will be lowered by one letter grade. The grading rubric for homework, along with suggestions on good mathematical writing, may be found on PWeb. Homework is 50% of your grade.

Exams: There will be a take home midterm due **Monday, April 10**. The questions will be available on Monday, April 3. The exam will be 20% of your grade.

Final: There will be a cumulative take home final which will count for 30% of your grade.

MASSS: The department has a student seminar series which runs many Tuesdays at 11 AM. I will give bonus credit up to $\frac{1}{4}$ of a point on your final grade if you attend at least 3 of these talks and, for each one, send me a paragraph by 5 PM on the Friday immediately following it describing what the talk was about and a new mathematical concept you learned from the talk

Brief solutions for the homework and your grades will be posted on the course's PWeb page.

Computer Program

We will occasionally use a computer program called Magma. Through a generous grant from the Simon Foundation we have a second 3 year license for this program on all MathLan computers. If you need a MathLan account or if you do not remember your password for the MathLan computers, please find Prof. Stone in his office (3829 Noyce). More information about Magma is on PWeb.

Other Class Policies

At least one day before each class, I will post a list of topics/definition(s) we will cover. You should find those definitions in the book and write them in your notes *before* class. This serves two purposes. (1) Reading math before the lecture greatly improves understanding the lecture and (2) I will not always spend precious class time copying definitions onto the board.

Cell phone usage is strictly prohibited during class. I typically do not allow laptops or tablets in class, but if you would like to take notes on such a device, come talk to me.

Please show up on time, please do not leave in the middle of class unless it is an emergency, and please keep conversations among yourselves during class to an absolute minimum.

Grinnell College makes reasonable accommodations for students with documented disabilities. Students need to provide documentation to the Coordinator for Disability Resources, Autumn Wilke, located on the 3rd floor of the Rosenfield Center (x3702) and discuss your needs with her. Students should then speak with me as early as possible in the semester so we can discuss ways to ensure your full participation in the course, and coordinate your accommodations.

Academic Honesty
Make sure you are familiar with the college's guidelines for academic honesty which you can find here: `http://catalog.grinnell.edu/content.php?catoid=12&navoid=2537#Honesty_in_Academic_Work`
My policies and guidelines may be found on the homework rubric. There are very serious consequences if you are found to be in violation of one of these policies. A typical first offense is a zero on the particular assignment, your final grade in the course is dropped a full letter grade, and you are ineligible to receive honors from any department.

Work Load
This is one of the most advanced mathematics courses on this campus. I set homework assignments with the expectation that most of you will spend at least 10-12 hours of dedicated time a week outside of class on each one.

Success In My Classes
Students come to this class with different backgrounds, skills, and experiences. Usually the most successful students in my class have two things in common: they work hard and effectively, and they are able to self-reflect honestly and then make adjustments to their behaviors accordingly.