MATH 4107 SYLLABUS

SPRING 2020

Course Number:	Math 4107 AU, AG
Course Name:	Abstract Algebra I
Lecture Time:	MWF 12:20–1:10 p.m.
Lecture Room:	Skiles 268
Instructor:	Dr. Christopher Heil Office: Skiles 218D Office Phone: 404-894-9231 Email Address: `heilmath.gatech.edu`
Office Hours:	M 1:15-2:15 p.m., W 1:15-1:55 p.m., Th 2:00-3:00 p.m., and by appointment
Course Web Page:	Canvas and `http://people.math.gatech.edu/~heil/4107/spring20`
Piazza signup:	`http://piazza.com/gatech/spring2020/math4107au`
Textbook:	I. N. Herstein, Abstract Algebra, Third Edition Lecture notes on the course web page expand on the text
Material:	Chapter 1: Not covered in class except for Section 1.4 Chapter 2: Groups Chapter 3: The Symmetric Group Chapter 4: Ring Theory Chapter 5: Fields
Prerequisites:	Math 2106 (Foundations of Mathematical Proof)

Prerequisites. This is a *proof-based* course on groups, rings, and fields. One of the main goals of the prerequisite course (MATH 2106) is to teach you proofs and proof-writing. If you haven't taken that course or an equivalent course where you learned to write proofs, you will most find it very difficult to jump into the abstract setting of this course. Unlike calculus, differential equations, etc., there are no *formulas* here, only *concepts*, and the *proofs* of those concepts—the reasons *why* things are true.

Academic Dishonesty. All students are expected to comply with the Georgia Tech Honor Code. Any evidence of cheating or other violations of the Georgia Tech Honor Code will be submitted directly to the Dean of Students. The institute honor code is available at

`http://www.honor.gatech.edu`

Grading. We will have 10 homework assignments, two in-class exams, and a final exam.

10 Homeworks	20 points each
Exam 1	40 points
Exam 2	40 points
Final Exam	80 points
TOTAL	360 points

Letter grades will be based on your accumulated points at the end of the semester, according to 90%, 80%, 70%, 60% cutoffs (although I may adjust the cutoffs downward at the end of the semester, depending on class distribution):

324–360	A
288–359	B
252–287	C
216–251	D
0–215	F

At the end of the course, I'll evaluate the class distribution and decide if a curve is needed. I'll only curve *down* from the above cutoffs, not up.

Attendance. Regular attendance and active participation in class is expected from every student. A student who misses a class is responsible for everything that was covered in that class.

Homework. Homeworks will consist of problems selected from the book or problems that I make up. Assignments will be posted on Canvas. A subset of the problems will be selected for grading. Homeworks will normally be due on Fridays starting with January 24, with some exceptions, such as when an exam is scheduled. LATE HOMEWORKS WILL NOT BE ACCEPTED.

Homeworks must be written in clear, complete sentences. You will not receive credit if the grader does not understand your writing.

I encourage you to type your homeworks using TeX or another mathematical typesetting system. I will provide sample TeX files that you can use as templates. Handwritten homeworks are acceptable, but they should be written on the FRONT SIDE of the page only, and must be stapled.

You are allowed (and encouraged) to work together with other students on the homework, as long as you each INDEPENDENTLY WRITE UP YOUR OWN SOLUTIONS. You are also allowed (and encouraged) to ask me questions, although you should try to think about the problems before asking. I strongly encourage you to work extra problems from the book on your own.

Exams. The tentative dates for the exams are:

Exam 1	Friday, February 21 (in class)
Exam 2	Friday, March 27 (in class)
Final Exam	Wednesday, April 29, 11:20 a.m.–2:10 p.m.

The exams are closed-book and closed-notes, except that you will be allowed to bring one 8.5x11 sheet of notes (you can write on both sides) to each exam. The final is comprehensive.

Makeup exams are given only in extraordinary circumstances.

Course Etiquette.

- Participate in class, but keep talking to class participation only.
- Attend all classes. Arrive promptly, and do not leave class early without permission.
- Notify the professor ahead of time if you will miss a class.
- Prepare ahead of time—read the text and the lecture notes before class!

Important Dates for Spring 2020.

Jan 6	First day of class.
Jan 20	MLK Day, no class.
Feb 21	Tentative date for Exam 1.
Mar 11	Last day to drop courses with a grade of "W."
Mar 16-20	Spring break, no class.
Mar 27	Tentative date for Exam 2.
Apr 21	Last day of class.
Apr 29	Final Exam.