

**MATH 3330 - 04 (12919) - Abstract Algebra – Spring 2019**  
**Syllabus**

**Instructor:** Dr. Gordon Heier

**Contact Information:**

Office: 666 PGH

Office Hours: M 3pm-4pm, or by appointment

Email: [heier@math.uh.edu](mailto:heier@math.uh.edu)

Web: [www.math.uh.edu/~heier](http://www.math.uh.edu/~heier), [www.math.uh.edu/~heier/teaching.html](http://www.math.uh.edu/~heier/teaching.html)

**TA:** Nikolas Panagopoulos

**Contact Information:** Office Hour: T 2pm-3pm, Fleming 11 (MUSL), or by appointment

Email: [npanagop@math.uh.edu](mailto:npanagop@math.uh.edu)

**Lecture:** MW 4pm-5:30pm, in SEC 202

**Exams:** Midterm exam: Wednesday, March 20, 2019, in-class (subject to change)

Final exam: Monday, May 6, 2019, 5pm-8pm (subject to change)

**Text:** Dan Saracino, Abstract Algebra: A First Course, 2nd Edition, Waveland Press, Inc., ISBN: 9781577665366

**Course Purpose:** An introduction to abstract algebraic structures, emphasizing group and ring theory

**Prerequisites:** Math 2331 (Linear Algebra) and 3325 (Transitions) or instructor consent

**Course Objectives:** Upon completion of this course, students may take Advanced Abstract Algebra (Math 4333) or Graph Theory with Applications (Math 4315)

**Course Content:** Sets, Cartesian products and binary operations, Properties of Integers including Principle of Mathematical Induction, Congruences, Division and Euclidean Algorithms and the Fundamental Theorem of Arithmetic;

Groups, cyclic and normal subgroups, isomorphisms and homomorphisms. finite permutation groups, normal subgroups and quotient groups;

Rings, integral domains and fields.

**Homework** will be assigned every Wednesday on my web site and will be due the following Wednesday. Late homework will not be accepted.

**Quizzes:** Several unannounced in-class pop-quizzes will be given throughout the semester.

**Attendance:** Attending classes and exams is mandatory for all students. Missing class makes a student liable to missing important information, pop-quizzes etc. Substantial documentation is necessary to receive any kind of excuse or make-up privilege.

**Grades:** The homework and the midterm exam will each account for 25 percent of your grade. The pop-quizzes will account for 15 percent, and the final exam will account for 35 percent. Your two lowest homework scores and your two lowest pop-quiz scores will be dropped.

**Disability:** If you think or know that you have a disability that needs special accommodation, please see me at the beginning of the semester so that the proper steps can be taken.

**Academic Dishonesty** will not be tolerated and dealt with appropriately

**UH CAPS Statement:**

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS ([www.uh.edu/caps](http://www.uh.edu/caps)) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the “Let's Talk” program, a drop-in consultation service at convenient locations and hours around campus.

[http://www.uh.edu/caps/outreach/lets\\_talk.html](http://www.uh.edu/caps/outreach/lets_talk.html)