

MATH 3330 - 04 (22687) - Abstract Algebra – Spring 2021
Syllabus (as of Jan. 18, 2021)

Instructor: Dr. Gordon Heier

Contact Information:

Office: 666 PGH (not in Spring '21 due to Covid-19)

Office hours: F 3-4, over Zoom (meeting info tba)

Email: heier@math.uh.edu

Personal website: www.math.uh.edu/~heier

Course website: UH Blackboard

TA: Huayang Chen

Contact Information: Office hours: tba

Email: hychen@math.uh.edu

Lectures: Lectures will consist of recorded discussions of a set of typed notes. The pdfs of the notes and the video files of the lectures will be posted on Blackboard as they become available, in an "asynchronous" way. Students will be notified by email once a new posting has been made.

Email communications: The primary means of communication for this course is email. Please be sure to monitor your official UH email addresses for important message. Note that you may have several such email addresses. It is assumed that you read ALL messages sent to any of your email addresses.

Exams: Midterm Exam: March 24-25 (W-Th), as a 4 hour take-home exam

Final Exam: May 6-7 (Th-F), as a 4 hour take-home exam

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

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.

Tentatively, we will cover Sections 0-14, 16, 17 from the textbook.

Homework will be assigned every Thursday (starting Jan. 21) on BLACKBOARD and will be due the following Thursday at 3pm on Blackboard. Late homework will not be accepted.

Grades: The homework and the midterm exam will each account for 25 percent of your grade. The final exam will account for 50 percent. Your two lowest homework scores will be dropped. Note: The UH interim grade policy WILL NOT be in place for the Spring 2021 semester.

File formats for submissions: The ONLY acceptable file format for any submissions by students is PDF. Students should ensure that they have access to a scanner or scanner app on a mobile device at all times. In particular, files in JPG format are NOT acceptable.

Attendance: Participation in all aspects of this course is mandatory for all students. Substantial documentation is necessary to receive any kind of excuse or make-up privilege.

Disability: If you think or know that you have a disability that needs special accommodation, please contact 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) 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

The following language is required by UH to be part of all syllabi:

Excused Absence Policy: Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston Undergraduate Excused Absence Policy and Graduate Excused Absence Policy for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to military service, religious holy days, pregnancy and related conditions, and disability.

Recording of Class: Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the Center for Students with DisABILITIES. If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with anyone without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

Syllabus Changes: Due to the changing nature of the COVID-19 pandemic, please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible through email.