

**Abstract Algebra I, Mathematics 3336, Section 001
Spring 2022**

Instructor: Katie Anders

Office: RBN 4046

Email: kanderson@uttyler.edu

Course Schedule: Class meets MWF from 1:25-2:20 P.M. in RBN 4024.

Course Website: You MUST activate your Canvas account. To do so, go to <https://www.uttyler.edu/canvas>. This is also the address to login. If you are registered in the course, you already have access to the course. Important documents will be posted on Canvas. Additionally, announcements may be made via email, so you must regularly check your uttyler email.

Office hours: TR 10:15-11:45 A.M. in RBN 4046 and by appointment arranged by email

Required Text: *A First Course in Abstract Algebra*, 7th edition, by John B. Fraleigh, ISBN # 978-0-201-76390-7

Course Description: A study of algebraic structures with emphasis given to groups, rings, and fields

Course Prerequisites: Math 3425 Foundations of Mathematics

Course Outline: We will cover Parts I, II, and III of the text in part or in full and may cover additional selected topics.

Student Learning Outcomes: Upon completion of this course, students should be able to do the following:

- Apply the basic ideas of abstract algebra in computations and proofs
- Communicate complex mathematical ideas both verbally and in writing
- Demonstrate the ability to do direct proofs, proofs by contradiction, contrapositive proofs, and proof by induction, within an algebraic context

Grading: Scores will be posted on Canvas. After the end of the semester, final course grades will be available on my.uttyler.edu. A final course grade of 90% is guaranteed to be at least an A, a final course grade of 80% is guaranteed to be at least a B, a final course grade of 70% is guaranteed to be at least a C, and a final course grade of 60% is guaranteed to be at least a D. All grades below D will be F. However, there is an exception in that you must have a passing homework average to pass the course. There is also the exception that your course grade cannot exceed your final exam score by more than one letter grade. This means that if you earn a C on the final exam, you cannot receive higher than a B in the class. If you earn an F on the final exam, you cannot receive higher than a D in the class. The breakdown of your final course grade into categories is given below.

Homework/Quizzes: 10%

Proof Portfolio: 10%

Midterm exams: 25% each

Final exam: 30%

If you have any questions about the grading of a particular homework or exam, you must contact me no more than one week after the day I return the graded assignment in class, whether you are present during that class or not.

Attendance: It is your responsibility to attend class. Attendance is mandatory. This means, among other things, coming to class on time and prepared. Before class begins, you should silence your cell phone and any other electronic devices. Students are responsible for all announcements made during lecture.

Homework: Homework will be assigned each class period. On Friday, at the beginning of class, the homework assigned from the 3 previous class periods will be collected. The two lowest scores from the homework/quiz category will be dropped at the end of the semester.

Quizzes: There may be quizzes. Quizzes will generally be announced in advance and will generally be given at the beginning of the class period. If you are tardy on the day of a quiz, you do not get extra time on the quiz. The two lowest scores from the homework/quiz category will be dropped at the end of the semester.

Proof Portfolio Problems: Most weeks, one proof problem from that week's assigned homework problems will be selected as the proof portfolio problem (P3). This problem will be graded simply as credit or no credit. Students will have the opportunity to re-submit, as many times as needed, P3's for which they did not receive credit. At the end of the semester, the student's grade for this category will be determined based on the total number of P3's for which they ultimately received credit. Students will not be penalized for repeat submissions of P3's. It will not be announced in advance which problem will be that week's P3. Intermediate deadlines for P3 resubmissions may be introduced as needed. All submitted drafts of P3 problems are to be kept in the student's Proof Portfolio binder.

Exams: There will be 2 midterm exams. A list of the test dates is given below. This list is preliminary and subject to change; at least one week advance notice of any change in test dates will be given.

Exam 1: Friday, February 18

Exam 2: Friday, April 8

Final Exam: The final exam will be on Friday, April 29 from 12:30-2:30 P.M.

Cell Phones: Cell phones are not permitted in class. You must silence them and put them away before class begins.

Calculators: The use of calculators and other electronic devices, including cell phones, during exams is strictly prohibited, so study accordingly.

Make-ups: Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, students participating in a debate contest, etc.) or for religious observation will be granted. For all make-ups of this type, prior notification of at least one week and documentation are required. Under no circumstances will make-ups be granted without prior notification. Leaving early for a break is NOT grounds for a make-up, so please make your travel plans accordingly. In almost all cases, missed work will be assigned a 0. Keep in mind that the 2 lowest homework scores will be dropped at the end of the semester.

Academic Integrity: Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook and unassigned problems, notes from class, assigned homework problems, your fellow Math 3336 students, the Math Learning Center, and your instructor. E-mail is the best way to contact me. I reply to email from 10:00 A.M.-4:00 P.M. Monday-Friday.

A note about a resource NOT allowed in this course: while the internet may be a valuable resource, using it to unethically acquire answers for your work will be considered a violation of academic integrity and processed accordingly. Similarly, copying answers from other students' assignments, past or present, violates the idea that your work must be your own.

University Policies: Monday, January 24 is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Social Security and FERPA Statement, please see the University Information module on the course Canvas page.