

MATH 4550: Modern Algebra I

Fall 2025

Instructor: Tony Shaheen

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Office Hours: Monday and Wednesday 11am - 12pm in Simpson Tower 317.

Course Website: Follow the link from <http://www.calstatela.edu/research/ashahee/>

Lectures: Monday and Wednesday, 4:30pm-5:45pm in SH 168.

Textbook: There is no required textbook for the course. If you want a textbook, there is this free one online by Thomas Judson: <http://abstract.ups.edu/download.html>. I've also used the book "A First Course in Abstract Algebra" by John Fraleigh. Or go to the school's library and go to the section that Fraleigh is located in and see which books there look good to you.

Prerequisite: Math 2550 and Math 3450 graded C or better.

Description: Groups, subgroups, direct products, cyclic groups, homomorphisms, normal subgroups, factor groups, first isomorphism theorem, symmetric groups.

Student learning outcomes: Students will know the definitions and theorems from class. Students will be able compute using the objects from class and homework. Students will be able to write proofs related to the objects in class and homework.

Homework: Homework will be assigned but not collected. The homework problems and solutions are posted on the course website.

Grading: Your grade will be based on two tests. Test 1 covers roughly the first half of the class and test 2 covers roughly the second half of the class. There is also an optional cumulative final exam that can be used to replace one or both of your test grades.

I will use the best of the following systems for your grade:

Two test system: Test 1 = 50%, Test 2 = 50%

Drop one test system: Better of test 1 / test 2 = 50%, Final = 50%

Drop both tests system: Final = 100%

When I hand back test 2, I will let you know the grade you have so far based on the two test system. You can then decide if you want to take the final exam or not. The final exam will be a cumulative exam that covers both test 1 and test 2 material.

Tentative Exam Dates: Note that the final exam time/day is scheduled by the school, and it may change.

Test 1: Monday, 10/13, in class

Test 2: Monday, 11/17, in class

Final: Wednesday, 12/10, 2:30pm-4:30pm

ADA statement: Reasonable accommodation will be provided to any student who is registered with the Office of Students with Disabilities and requests needed accommodation. Let me know if you take your tests with OSD.

Academic honesty statement: Students are expected to do their own work. Copying the work of others, cheating on exams, and similar violations will be reported to the University Discipline Officer, who has the authority to take disciplinary actions against students who violate the standards of academic honesty.

Student responsibilities: Students are responsible for being aware of all announcements that are made in class, such as changes in exam dates, due dates of homework and papers, and cancellation of class due to instructor's absence. Students are responsible for announcements made on days that they are absent.

Students must check their CSULA email account regularly for information from the instructor and the Department. Failure to do so may result in missed deadlines or other consequences that might adversely affect students. Note that you can forward this email account to any other account of your choosing.