



Modern Algebra I

MTH 450-102/550-103/550-104 || CRN: 4280/4218/4282 || Fall 2023

- Instructor:** Dr. Tom Cuchta
Time: 5:00-6:15 MW
Location: SH 509
E-mail: cuchta@marshall.edu
Office: SH 721
Walk-in office hours: See my website <http://tomcuchta.com>. They may change throughout the semester without notice. Alternate office hours may always be scheduled via e-mail.
- Class webpage:** <https://tomcuchta.com/teach/classes/2023/MTH450.550-Fall2023-Marshall/>
Textbook: "First Course in Abstract Algebra" 7th edition by Fraleigh ISBN: 9780201763904
Course Description: Structure of the abstract mathematical systems; groups, rings, fields, with illustrations and applications from number theory.
- FREE math tutoring:** Virtual and drop-in tutoring (SH625) are offered by the math department:
<https://www.marshall.edu/math/tutoring/>
- Calculator policy:** Calculators will not be permitted on exams.
Attendance policy: Every class meeting should be attended by the student in its entirety, but attendance itself will not be recorded for a grade. If a class is missed, it is the *student's responsibility* to find out what was missed.
- Homework:** Homework will be assigned weekly and due on Wednesdays. Graduate students may be assigned more homework than undergraduate students.
Late homework: Homework may be submitted late for a penalty.
Presentations: (*550 only!!*) Students enrolled in a graduate section of the course will be asked to present solutions to homework problems and material from the text to the class semi-regularly. Each presentation will be scored by the instructor using a presentation rubric. Followup work (including presenting again) may be assigned to improve the presentation score on a given presentation.
- Quizzes:** Quizzes will be given randomly and will be unannounced in advance. 20% of the lowest-scored quizzes will be dropped.
Exams: There will be three one-hour exams in this course.
Final exam: There will be a cumulative final exam in this course at the time defined by the registrar's office.
- Make-up exam policy:** If an exam is to be missed due to an excused absence (defined as in this page), then it is the *student's responsibility* to arrange an alternative time to take the exam at least one week before the exam is given. If the student misses an exam due to an unexcused absence, the exam may be replaced with the percentage earned on the final exam. The unexcused absence policy applies *only once*.
- University policies:** Various university policies such as Academic Dishonesty, Academic Dismissal, Academic Forgiveness, Academic Probation & Suspension, Affirmative Action, Pre-Finals Week, D/F Repeat Rule, Excused Absence, Inclement Weather, Sexual Harassment, Students with Disabilities, and University Computing Services Acceptable Use can be found at the Marshall University academic affairs webpage here: <https://www.marshall.edu/academic-affairs/policies/>

Grading policy:

Category	MTH 450	MTH 550
Homework	30%	20%
Quizzes	20%	15%
Presentations	0%	15%
Hour exams	30%	30%
Final exam	20%	20%

Grade	Percentage Range
A	$90\% \leq \text{Points Earned} \leq 100\%$
B	$80 \leq \text{Points Earned} < 90$
C	$70 \leq \text{Points Earned} < 80$
D	$60 \leq \text{Points Earned} < 70$
F	$0 \leq \text{Points Earned} < 60$

Modern Algebra I Calendar Fall 2023

Week	Sections
21 Aug – 25 Aug	
28 Aug – 1 Sep	
4 Sep – 8 Sep	4 September – <i>NO CLASS – LABOR DAY</i>
11 Sep – 15 Sep	
18 Sep – 22 Sep	<i>EXAM 1</i> – 20 September
25 Sep – 29 Sep	
2 Oct – 6 Oct	
9 Oct – 13 Oct	
16 Oct – 20 Oct	<i>EXAM 2</i> – 18 October
23 Oct – 27 Oct	
30 Oct – 3 Nov	
6 Nov – 10 Nov	
13 Nov – 17 Nov	<i>EXAM 3</i> – 15 November
20 Nov – 24 Nov	<i>THANKSGIVING BREAK</i>
27 Nov – 1 Dec	<i>PRE-FINALS WEEK</i> 1 December – last day of class
4 Dec – 8 Dec	<i>FINALS WEEK</i>

Course outcomes

Course outcomes	Assessment
Students will be able to use definitions and theorems to write proofs of results in modern algebra.	Exam
Students will be able to create examples and counterexamples for algebraic structures.	Exam
Students will be able to read and apply theorems.	Exam