



Course title and number Algebra I (MATH 701)
Term Fall 2024
Class times and location Mondays and Wednesdays/02:20PM - 03:35PM/Leconte College 315

Instructor Information

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Office	LeConte 450
Office Hours	MW 5:10PM - 6:10PM
Class Web Page	Blackboard

Course Description and Prerequisites

Description: Algebra is a key discipline within mathematics and is likely to be integral to any research field you choose during your graduate studies. The Math 701/702 sequence aims to give you a comprehensive introduction to algebra and equip you with a robust foundation for exploring more complex topics in the future. Through numerous examples, problem-solving exercises, and proofs, you will hone your algebraic intuition. Another key objective of this course is to prepare you for the Algebra Qualifying Exam. In Math 701, we will start by revisiting group theory before progressing to more advanced subjects. Later in the course, we will shift our focus to ring theory. We plan to explore Chapters 1-9 of Dummit and Foote, though not every section will be covered.

Textbook and/or Resource Material:

- Dummit and Foote, *Abstract Algebra*, 3rd Edition.

However many others are highly recommended:

- Jacobson, *Basic Algebra I*, 2nd Edition.
- Hungerford, *Algebra*, 8th Edition
- Artin, *Algebra*
- Milne, *Group Theory*.

Course Work and Grades: Regular homework assignments + two exams (70%), and the final exam (30%) will constitute the foundation for determining grades in the course.

Honor Code: The Honor Code will be strictly observed in this class. As you should always be aware, the University of South Carolina operates under an Honor Code. In this course, violations of the USC Honor Code could result in a **0** for an assignment and an **F** in the course. https://www.sc.edu/about/offices_and_divisions/student_conduct_and_academic_integrity/index.php.