

Syllabus for (Graduate) Modern Algebra II

Spring 2026, Howard University

Course #: Math 211
Class time: Mon-Wed, 11:10am-12:30pm
Classroom: Annex III (Graduate School) - #224
Website: <http://www.samuelhopkins.com/classes/211.html>

Instructor: Sam Hopkins
Email: sam.hopkins@howard.edu
Office: Annex III (Graduate School) - #220
Office Hours: Tuesdays 12-1pm, or by appointment

Course content: This is a continuation of the first semester of graduate modern algebra. We will start by studying the theory of fields and their extensions, i.e., "Galois theory." Then we may cover other topics, depending on time.

Prerequisites: Math 210 (Modern Algebra I)
Textbook: T.W. Hungerford, *Algebra*

Grading: 50% Homeworks • Midterm 25% • Final Project 25%

There will be 5 **homework** assignments for the semester. There will be one in-class **midterm exam** before spring break, and a **final project** at the end of the semester. The final project will involve independent research and a presentation.

Collaboration on the homework is encouraged, as long as each person understands the solutions, writes them up in their own words, and indicates with whom they collaborated. Collaboration on the other assessments is not allowed.

I expect you to show up to class and be engaged. Grades will be posted to the Canvas site. I may consider other factors, like class participation, when determining final letter grades, especially in borderline cases.

Course outline: We will start by covering Chapters 5 and 6 of Hungerford, on field theory and Galois theory. Then, depending on time, we may cover further topics, possibly including: the representation theory of finite groups; basic commutative algebra; basic algebraic number theory. The final project will involve independent research from the students, guided by the instructor, on one of these topics, and a presentation from each student on their topic at the end of the semester.

Reproduced below this line are various department- and school-wide policy statements.

Academic Code of Student Conduct (*please see Howard University handbook*): No copying, unauthorized use of calculators, books, or other materials, or changing of answers or other academic dishonesty will be tolerated. Cheating will not be tolerated. Anyone caught cheating will receive an F for the course and may be expelled from the university.

Grievance Procedure: If you have any problems with the policies or rules of this course, discuss your concerns with your instructor. If you are still unable to come to a satisfactory arrangement, you may contact (depending on your status) the Director of Undergraduate Studies, Dr. Jill McGowan, jmcgowan@howard.edu, or the Director of Graduate Studies, Dr. Henok Mawi, henok.mawi@howard.edu, and then, finally, the Chair of the Department, Dr. Bourama Toni, bourama.toni@howard.edu.

Disability Accommodations: Howard University is dedicated to fostering an accessible, inclusive, and supportive learning environment for all students. We are committed to ensuring that students with documented disabilities receive equal access to all course activities. If you require accommodations, please reach out to the Office of Student Accessibility (OSA) to discuss your needs in a confidential setting. The OSA is responsible for determining reasonable accommodations in both classroom and clinical settings. Please note that accommodations should be requested at the beginning of each semester and cannot be applied retroactively. To request accommodations, contact the OSA via email at accessibility@howard.edu or visit <https://studentaffairs.howard.edu/Accessibility> for more information.

Statement on Sex and Gender-Based Discrimination, Harassment and Violence: Howard University's Policy Prohibiting Sex and Gender-Based Discrimination, Sexual Misconduct and Retaliation (aka, the Title IX Policy) prohibits discrimination, harassment, and violence based on sex, gender, gender expression, gender identity, sexual orientation, pregnancy, or marital status. With the exception of certain employees designated as confidential, note that all Howard University employees – including all faculty members – are required to report any information they receive regarding known or suspected prohibited conduct under the Title IX Policy to the Title IX Office (TitleIX@howard.edu or 202-806-2550), regardless of how they learn of it. For confidential support and assistance, you may contact the Interpersonal Violence Prevention Program (202-836-1401) or the University Counseling Service (202-806-7540). To learn more about your rights, resources, and options for reporting and/or seeking confidential support services (including additional confidential resources, both on and off campus), visit <https://howard.edu/title-ix>.