Course Policies
Prof. Shahed Sharif

Textbook. We will be using *Abstract Algebra*, 3rd ed. by Dummit and Foote. The goal is to cover chapters 8, 10, and 12, some material in chapters 11 and 18, and related content TBA. The additional content will be either field theory, or applications of representation theory. If you have a strong preference, please let me know.

Course description. Review and continuation of the study of algebra begun in MATH 470. Covers some of the following: the theory of finite group theory including the Sylow Theorems, polynomial ring, unique factorization, number fields, and finite fields.

Course objectives. The goal of this course is to understand the theory of modules, especially of modules over a PID, and elementary representation theory. Modules are a natural generalization of vector spaces, but have a much richer structure. Representation theory uses the tools of linear algebra to analyze groups. The bulk of this course is theoretical, but we will endeavor to include some applications at the end. I hope to include applications to quantum mechanics.

Course requirements. The grading scheme is as follows:

- 20% for homework
- 40% for 2 exams
- 40% for final

Homework is announced every Tuesday and is due in class the following Tuesday. If you missed the announcement, check my webpage or email me.

On the front page of your homework, put your name and the assignment. If you turn in more than one sheet, you must staple your homework. You must also show all work to receive full credit. You will be graded on your writing! Correct and clear grammar is essential to a correct proof. Of course, your reasoning must also be completely clear for full credit. Rewriting homework before handing it in is highly advisable. You may type your problem sets, but if you do, please use \LaTeX. Homework fulfills this course’s writing requirement.

After homework is handed in, I will be happy to go over complete solutions in office hours. Feel free to also e-mail me questions.

The exams are tentatively scheduled for February 20 and April 7.

The final is scheduled for Tuesday, May 12, 6:15–8:15 PM. If it would help, the final exam replaces your lowest semester exam score.

Late assignment policy. Late homework is not accepted. There are no exceptions! Instead, the lowest two homework scores are dropped.

Make-up exams are not given; see the exam policy above.
Office hours. My office hours are Monday, 9:30–11:30 and Tuesday, 10–11. Drop by the math conference room, Craven Hall 6242, during those times—you don’t need an appointment! If you have a conflict, send me an email and we’ll work out an alternate time. You can also email me any questions that you have. Make sure you include as much relevant detail as possible, and be aware that I may not have the textbook with me when I read your email.

Ethics. You are encouraged to work with others on graded assignments, but the final product should be your own work. In particular, you may not read your classmates’ finished assignments until your own is completed! The same goes for other sources—online, back of the book, or other sources. Avoid looking at these sources, or if you do, take no notes on them. Failure to follow these guidelines is considered plagiarism, and all involved parties will at a minimum earn a zero on the relevant assignment and have their actions reported to the Dean of Student Affairs.

ADA policy. Students with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disability Support Services (DSS) in Craven Hall 4300 (ph: (760) 750-4905; TTY: (760) 750-4909). Students authorized by DSS to receive reasonable accommodations should meet with me during my office hours in order to ensure confidentiality.