

Abstract Algebra

Math 761

Syllabus

Spring 2024

Instructor: Cain Edie-Michell

Lecture: MWF 9.40am - 11.00am; MURK 104 (UNH) and Zoom (PSU)

Credits: 4.0

Office Hours: TBD

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Text: We will be using the free textbook *Abstract Algebra: Theory and Applications* by Thomas W. Judson.

Course Description:

This course establishes the axiomatic framework that underlies number systems and similar mathematical structures, investigating basic properties of groups, rings, fields and their homomorphisms. Topics covered may include group actions, isomorphism theorems, matrix groups, the Sylow theorems, and Galois theory, time permitting.

Attendance Policy: There is no attendance policy. Low attendance will negatively affect your grade.

Modality: For students enrolled at UNH, lectures will be given in-person in Morse 217. For students enrolled at PSU lectures will be accessed through Zoom. Lecture recordings will only be provided under special circumstances (i.e. sickness).

Written Homework: There will be weekly written homework graded for accuracy. These will be due each Friday by the end of class (starting September 8th, 2023). Submission method is through the Gradescope page for this course. A learning goal of this course is to develop proficiency in \LaTeX , a mark-up language for typing mathematics (this syllabus was created with \LaTeX). The format for homework submissions should be PDF's produced in \LaTeX . Scans of neatly handwritten solutions will also be accepted, but will occur a 20% penalty.

If you choose to handwrite your solutions, then please write neatly and with clear exposition. A messy or convoluted solution will not be graded. Feel free to work on problem sets with classmates from your section; I expect you to write up your assignment independently and in your own words. The lowest two homework grades will be dropped. There will be no make up opportunities for homework. Extenuating circumstances will be dealt with on a case-by-case basis.

Presentation: Each student will be required to present a proof from the weekly homework at least once during the semester. These presentations will be held during Fridays lectures, beginning February 9th. Extra credit may be awarded to students who choose to give more than one presentation.

Midterm Exams: There will be two in-class midterm exams. Here is the exam schedule:

Midterm Exam 1 Wednesday March 6th, 2024

Midterm Exam 2 Wednesday April 17th, 2024

If you have an acceptable reason for missing a midterm exam (approved in advance), I will substitute your final exam grade for your grade on the missed midterm exam.

Final Exam: The final exam will be comprehensive. You will have two hours to complete the final exam. The date and location of the final exam is TBA.

Remark: You will be taught all the material necessary to answer every question on an exam. However, do not assume that you will have seen a form of each exam question before the exam.

Grading: Your grades will be calculated using one of the two methods:

Method 1: 20% Homework + 5% Presentation + 25% Midterm 1 + 25% Midterm 2 + 25% Final Exam

Method 2: 10% Homework + 5% Presentation + 35% Best one of two Midterms + 50% Final Exam

Your awarded grade at the end of the semester will automatically be calculated as the highest of these two methods. Individual grades for each of these items will be posted to the course Canvas page and Gradescope. A running total of both methods will not be kept. In particular, the “Total Grade” you see in Canvas will not reflect the above weightings, and will not be correct.

Technology: Calculators are not permitted during any quiz or exam. I do not care if you use them on your homework.

Learning Needs: If you have learning needs that have been evaluated by the Student Accessibility Services (SAS), please provide me with the documentation from SAS as soon as possible and at least one week prior to the first exam so that proper accommodations may be made. See <https://www.unh.edu/diversity-inclusion/student-accessibility> for more details.

Office Hours: My office hours are posted above, but I am also available by appointment. So if none of the above times work for you, do not hesitate to contact me to work out an alternative meeting time.

Covid: It is your responsibility to pay attention to messaging from the University (RAVE and Canvas and Email) in the event that any COVID protocols change. You can always access current COVID protocols and requirements through the Health and Wellness Website: <https://www.unh.edu/health/health-alert-covid-19>

We all value the health and safety of our Wildcat Community and respect everyone’s unique health and risk tolerance. You are welcome to wear a mask in this classroom if you choose. It is your responsibility to obtain a mask before coming to class.

If you are required to be in isolation or quarantine, the Dean of Students will send a letter to all of your instructors. Accommodations will be made in this scenario to ensure that you have full access to the course materials during the quarantine period.

A valid Wildcat Pass is required to be on campus and in this classroom. Your Wildcat Pass will be invalid if you are supposed to be in isolation or quarantine, or if you have not completed the arrival and baseline testing requirements.

Some Important Dates:

- First day of class: Wednesday, January 24th
- Last day to drop a course with tuition refund, Friday, February 23rd
- Mid-Semester: Friday, March 8th
- Spring Recess: March 18th - 22nd
- Last day to drop a course with W, Friday, March 29th
- Last day of class, Monday, May 6th

Disclaimer: I reserve the right to add or change anything on this syllabus. Changes will be announced to the class. Students are responsible for all class-wide announcements made in any form.