Instructor information:

Instructor: Dr. Allison H. Moore
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Course information:

MATH 602 - 001. Abstract Algebra.
Term: Spring Semester, 2022. CRN: 42824
Class Meetings: 11:00 am - 12:15 pm, TTh, Harris Hall Room 2104
Modality: Hybrid Synchronous

Hybrid synchronous modality

VCU defines the hybrid synchronous modality as follows: *A minimum of 30% of the course time is completed by the instructor and student physically sharing the same physical space/location at the same time. The remainder of the course time is completed in an online/remote environment (i.e, learning management system). Required to take place on a specific day and time.*

This is primarily an in-person class with extra material support online. Lectures and class activities will be held in-person, in our Harris Hall classroom on Tuesdays and Thursdays. Homework will be submitted online. Exams will be held in-person, barring any further complications from the pandemic. On occasion, regular lectures may need to be conducted over Zoom; when this happens, I will notify the class through Canvas and we will use the following Zoom URL:

`https://vcu.zoom.us/j/92387770131`   Meeting ID: 923 8777 0131

During the Spring 2022 semester, masks are required for all VCU students and faculty regardless of vaccination status. Please remember your masks when you attend class in person.

Prerequisites:

MATH 502 with a minimum grade of a D, or permission from the department and instructor.

Textbook:

"Abstract Algebra, 3rd edition" by Dummit and Foote. ISBN 0471433349.

Course website:

A Canvas page is set up for the course. (See `https://canvas.vcu.edu`) Important announcements, a copy of the syllabus, homework assignments, quizzes, study guides, and (if applicable) at-home exams will be posted to Canvas. Check this website regularly and make sure you receive email announcements that go through Canvas.

Learning Objectives

This class is a continuation of Math 502 (abstract algebra) will give an introduction and overview of groups, rings and fields, emphasizing the latter two topics during 602. Examples will be emphasized throughout the semester. Ring theory topics will start with a review of rings, integral domains, ideals, polynomial rings, factorization and irreducibility and then move into module theory and a more advanced look at vector spaces. Field theory will be motivated by classic problems about polynomials and geometry, and topics may include algebraic extensions and closures, an introduction to Galois theory, and (time permitting) and introduction to homological algebra.

Homework and Peer Review

Homework will be assigned periodically and will be due approximately every two weeks on Sunday evenings. Handwritten or typed homework is to be submitted in PDF format online, through Assignments in Canvas. Working problems is the best way to learn the material, so expect homework assignments to be a little long. Not every problem on the assignments will be graded; only a subset will be graded for correctness and the remaining problems will be marked for completion.

In addition to solving homework problems, you will have the opportunity to read and review other students' work. After each assignment is due, anyone who submitted an assignment online will automatically be assigned a small number of problems to assess, using the "Peer Review" feature in Canvas. Participation in peer reviews is voluntary, but recommended because it is a valuable learning experience. Additionally, doing peer reviews for your classmates' homework can earn you bonus points on your overall homework average. Each meaningful Peer Review (approximately 3 per assignment) will be worth a point, towards a maximum of 15 bonus points to be added to your homework average.

Note: In order to preserve the anonymity of your work, please do not include your name or identifying information on your homework paper.

Paper homework will also be accepted, however, students who submit late work or paper will not be able to participate in that particular homework assignment's peer review cycle. The lowest homework assignment will be dropped at the end of the semester.

Participation

Participation (attending lectures either in person or online) and completing assignments (homework, quizzes, and exams) is required for success in this class. Participation is worth a small percentage (5%) of your overall grade.

Quizzes

We will have occasional quizzes throughout the semester. Quizzes will be short and designed to reflect what we are currently learning. Quizzes may take different formats: either on paper, during class or conduced through the "Quizzes" feature of Canvas. Be sure to follow Canvas announcements for reminders about quiz dates and formats.

Exams:

Expect that midterm exams for this course to be timed, and conducted in person during class.

If the coronavirus pandemic forces our class to be conducted online during the time of a midterm exam, we will switch to an 'at-home' exam implementation. If this happens, I will provide a PDF of the exam on Canvas, and students will be given a fixed amount of time to complete the exam. These exams are to be completed either on paper, typed, or on a tablet with a stylus. Your exam solutions, formatted as a PDF, will be returned by online submission in Canvas.

The final exam will be conducted as an 'at-home' exam. Final exam times are set by VCU here: `https://rar.vcu.edu/exams/index.html`.

I will be creating exams that are designed to be open-book and open-notes and with calculators permitted, but restricted to our own course materials. The use of the internet, or any other method of asking for and receiving help from another individual or resource will be strictly forbidden on these exams. In particular, plan to bring your textbook, notes, and old homework assignments to your exams.

The final exam may contain an "oral examination" component which will be held over Zoom.

Make-up exams: If you miss an exam and have a valid, documented excuse, I will work with you to coordinate a make-up exam or will apply the final replacement policy.

Final replacement policy: Because students are facing unprecedented difficulties due to Covid-19 related disruptions, I will be automatically implementing the following final exam replacement policy. Your final exam score can be used to *replace* your lowest midterm exam score (provided that the final is higher than the midterm it is replacing). For example, if your scores are M1 = 60, M2 = 70 and F = 80, your end of semester scores will become M1 = 80, M2 = 70 and F = 80. If your scores are M1 = 90, M2 = 80 and F = 70, there will be no change.

An early final will not be given to accommodate travel plans.

Schedule:

Quiz 1	Thursday, February 3	
Midterm 1	Thursday, February 24	in class exam
Quiz 2	Thursday, March 24	
Midterm 2	Thursday, April 14	in class exam
Quiz 3	Thursday, April 28	
Final Exam	Thursday, May 12	at home exam

Grades:

Your grade will be determined by the following:

Homework	25%	Homework scores averaged together, lowest dropped
Participation	5%	Points based on general participation
Peer Review	Bonus	A maximum of 15 points bonus towards the homework average
Quizzes	10%	
Midterm 1	20%	Not cumulative
Midterm 2	20%	Not cumulative
Final	20%	Cumulative (with final exam replacement policy)

About curves: The default bracketing of letter grades is as follows: $A : 90 - 100\%$, $B : 80 - 89\%$, $C : 70 - 79\%$, $D : 60 - 69\%$, and $F : 0 - 59\%$. You should plan on estimating your progress throughout the semester with this letter grade distribution.

Depending on the severity of the midterm and final exam performance, I may choose to apply a "curve" at the **end of the semester**. What this means is that I reserve the right to adjust the letter grade brackets. However, your letter grade will **never** drop below the initial generic bracketing. While my typical curve might improve your letter grade over the raw numerical score, it usually doesn't change the grade much. In general, it is not a good strategy to count on the curve to raise your grade.

The instructor reserves the right to offer extra-credit assignments, to drop additional assignments, or make other small adjustments as necessary.

Honor System: upholding academic integrity

The VCU Honor System policy describes the responsibilities of students, faculty and administration in upholding academic integrity. According to this policy, "Members of the academic community are required to conduct themselves in accordance with the highest standards of academic honesty, ethics and integrity at all times." Students are expected to read the policy in full and learn about requirements here: `https://conduct.students.vcu.edu/vcu-honor-system/`

Our shared learning environment

Everyone should know that I am grateful for your presence and appreciate your input in our in-person and online classes. You are welcome here, and our diverse backgrounds make us stronger together. I am dedicated to providing a welcoming and inclusive environment for all students, independent of your immigration status, country of origin and/or citizenship, race, ethnicity, religious affiliation, gender/sex, gender identity, sexual orientation, age, ability or disability, socioeconomic status, or perspective. Thank you for joining my class and bringing your unique experience and background to our intellectual community!

Students with disabilities:

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, as amended, require that VCU provide "academic adjustments" or "reasonable accommodations" to any student who has a physical or mental impairment that substantially limits a major life activity.

To receive accommodations, students must register with the Office of Student Accessibility and Educational Opportunity on the Monroe Park Campus (828-2253) or the Division for Academic Success on the MCV campus (828-9782). Please also visit the Student Accessibility and Educational Opportunity website via https://saeo.vcu.edu/ and/or the Division for Academic Success website via `https://das.vcu.edu/` for additional information.

Once students have completed the registration process, they should schedule a meeting with their instructor (s) and provide their instructor (s) with an official accommodation letter. Students should follow this procedure for all courses in the academic semester.

Requesting accommodations

The university recognizes that some students who previously did not need Section 504 Academic Accommodations, and who have a qualifying condition or disability, may need support or assistance during the return to campus process. A modified approach for the temporary and more permanent need for accommodation has been developed and implemented to provide students with full access to programs and activities related to their academic majors. Because every case is different, student requests are evaluated on a case-by-case basis. Please share your need for an accommodation with the Student Accessibility and Education Office, or for MCV Campus students, the Division for Academic Success, after you have worked directly with your faculty member.

Extended Syllabus:

Students should visit `http://go.vcu.edu/syllabus` and review all syllabus statement information. The full university syllabus statement includes information on safety, registration, the VCU Honor Code, student conduct, withdrawal and more.