

MATH 4210/5210 Abstract Algebra

General Course Information

Instructor:

JS Lee

E-Mail Address:

jongsoo_lee@uml.edu

Virtual Classroom Meeting Dates and Times:

Thursdays 7:00 - 9:50 PM (May 21 to August 6).

Also on Friday May 29 and Friday July 31.

All meetings will use Zoom.

Office Hours:

By appointment.

Course Description

Here are the topics that we will cover:

Group theory - The basics and in-depth topics.

Rings and fields - The basics and some selected topics.

Other topics - Applications of abstract algebra in sciences and other branches of mathematics.

The content will depend on student knowledge/progress and pace of the course.

Prerequisites for the Course

Linear Algebra (MATH 221). Discrete mathematics helpful but not required.

Course Materials

Required Book:

Pinter C. Book of Abstract Algebra, 2nd Edition. Dover.

Required Software:

We will use Zoom for virtual meetings and use Blackboard for the submission of your work.

Virtual Classroom Schedule and Attendance Policy

We will use Zoom for the virtual class meetings (also for virtual office hour meetings). The class meetings occur on Thursday (and some Friday) evenings for 3 hours. I will hand out the notes and assignments approximately a week before the class meeting, and we will spend 1.5 to 2 hours of class time on solving problems/assignments after the lecture. **The student participation is crucial, and attendance is required at class meeting times for all 3 hours.**

Interaction Guidelines – Communication and Participation:

For communication outside of class meetings, please email me using my UML email. I strongly encourage students to set up office hours with me by making appointments via email. We will either communicate by email or meet with Zoom if necessary. Also, I will send out the announcements and assignments to your UML email addresses, and hence it is important that you **check and use your UML email**. During Zoom class meetings, the students are required to participate. When conducting Zoom meetings, I expect the students to turn on the camera, but may mute when not speaking. Since a major component of class meeting consists of problem solving, **participation is graded**. The office hour will count as participation grade.

Netiquette:

Netiquette stands for Network Etiquette. It refers to proper behavior while interacting online. The golden rule of netiquette is essentially to treat people as you would want to be treated. Please be polite and considerate. Think about whether your comment could cause hurt feelings. Be careful about how your words can come across because misunderstandings can be common online. Feel free to use emoticons to show your tone.

Assignment Guidelines

How You Will Be Graded:

Your final course grade will be based on the following (approximate)

Requirement	% Total Grade
Attendance and Participation	30%
Homework	50%
Exams	20%
Total:	100%

Your final course letter grade will be determined as follows:

We will begin with traditional cutoffs for the grades (90-100 for A, 80-89 for B, etc.), but we can make adjustments to lower the cutoffs if necessary.

Homework:

Homework will be assigned weekly. Since the problem solving and participation constitute a major part of the course, it is essential that students attempt and complete the assignments. Please ask for help outside of class if needed (office hour included). The homework and participation will also be the majority part of your course grade. You will submit your homework through Blackboard as a PDF.

Exams:

There may be one or more exams. The exam can be take-home, oral exam, or a combination of both. The exact dates are to be determined.

Make Up Policy:

Make up work will not be accepted unless excused. Late homework will be subject to penalty and will not be accepted at all after certain time.

Academic Integrity Policy

UMass Lowell Online students are expected to be honest and to respect ethical standards in meeting academic assignments and requirements. A student who cheats on an examination or assignment is subject to administrative dismissal. Please visit the Academic Integrity website (<https://gps.uml.edu/policies/academicintegrity.cfm>) for specific details regarding this policy.

Student Disability Services

UMass Lowell Online students requiring academic accommodations should contact Student Disability Services (<https://www.uml.edu/student-services/Disability/default.aspx>) for assistance.

UML Library Off-Campus Access

Off-Campus library access requires users to login to the proxy server. Information can be found at this link: <https://uml.libanswers.com/faq/203636>

Course Calendar

Week	Topics	Assignments/Activities/Exams
1	Preliminaries; Group definition	Chapter 1-3; Appendix
2-3	Groups: subgroups, permutations	Chapter 4-8
4-7	Groups: isomorphism, homomorphism, quotient groups	Chapter 9-16
8-11	Rings and Fields	Chapter 17-27 (selected)
12	Review	Exam (tentative)