

Math 430 Abstract Algebra II
Spring 2021

Instructor: Dr. Michele Intermon

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Text: *Algebra II* by Ramji Lal (*this is available electronically from our library*)

Content: The goal of this course is to continue our investigation of algebraic ideas. Our main focus will be to prove the structure theorem for modules over a principal ideal domain. In pursuit of this goal, we will aspire to discuss the material in Chapters 1, 3, 6, and 7. This class is an intensive proof-writing class. It is expected that you are already familiar with the basics of writing proofs, and your ability to logically and coherently write up proofs will impact your grade.

Course Structure and Workflow: There are several pieces to this course. Each sort of assignment plays a role in helping you absorb the material into the framework of your own knowledge. The workload in this class is comprised of:

Problem Sets: 45% This is the practice part of the course. Most of us do not learn by watching; we learn by doing. Problem sets provide a forum for discussion of the material and a means of expanding on the concepts introduced in class as well as practice in communication. The problem sets will be assigned every week or two and selected problems will be graded. The work you submit, like a finished essay, should be well written. The correctness of the problem as well as the communication of the solution are both important pieces of how well your work is received. Please note that while collaboration is acceptable on homework assignments, collaboration refers to talking about problems and does not include copying solutions or writing solutions together. Late problem sets will not be accepted.

Engagement: 35% This class will be actively guided by all of us, as a seminar class. That means that you will each have responsibilities for presenting material on a regular basis. While these assignments will be made to teams, this is an individual grade, based on how well prepared you are, how well you work with your team in terms of being able to contribute to the presentation when needed and how equitably your team distributes responsibilities. Note that presenting material on a continuous rotating basis means that necessarily some flexibility is required in terms of exact beginning and ending of time/material. Please also note that while presenters need to be prepared, they are not expected to be experts. We'll talk more about expectations in Week 1. Finally, engagement also requires attendance and attention in all classes, not just those you are leading.

Exam: 20% There will be a final exam. As scheduled by the Registrar, this is **Monday, June 7, 1:30-4pm**, and you should plan for it to be an in person, written exam.

Online Etiquette: During our Teams class meetings, please **turn ON your video** and **turn OFF your microphone** until you wish to speak. Note that you can change the background of your video feed; just make sure you choose something that is not too distracting to the rest of us. Please **DO** speak up freely to ask questions. This *is* class. Don't stand on ceremony as you would in a formal meeting. The only reason mics are off in general is to eliminate grating audio feedback. There will be **NO recording** of class meetings - by anyone. You wouldn't be allowed to record if we were in the classroom, and now this is our classroom. People should feel free to speak without worrying that the questions they ask will remain in the ether.

Of course, if there is a particular accommodation that needs to be made, say in accordance with a documented disability, this will be done; please speak with me.

Honor Code: As a student at Kalamazoo College, you have pledged to uphold the [Honor Code](#). This includes reporting to me any dishonorable behavior you know about involving this class, as well as not engaging in such behavior yourself. Any assignment found to have been submitted in violation of the honor code will receive an automatic F, and the infraction will be reported to the Dean of Students.