

Graduate Algebra 2 (Math 2501)

University of Pittsburgh, Fall Semester 2019

Welcome to Algebra 2! Please read this syllabus carefully. All this information and all future announcements will be available on the course webpage and/or via email.

https://www.pitt.edu/~caw203/classes/2501_2019/

Goals: This is a graduate-level course introducing various fundamental notions about fields, rings, and modules. After a survey of students, the course goals are the following.

- Fundamentals of rings and modules
- Extended examples: modules over principal ideal domains
- Introduction to commutative algebra
- Commutative algebra, part 1: domains finite over \mathbb{Z}
- Commutative algebra, part 2: domains finitely generated over a (algebraically closed) field*
- Introduction to non-commutative algebra
- Non-commutative algebra, part 1: Representations of finite groups
- Non-commutative algebra, part 2: Finite dimensional algebras and quivers*

The topics adorned with a "*" may be shortened due to time limitations.

Instructor

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Time Monday, Wednesday, and Friday, 11:00am-11:50am

Room Thackeray 525

Resources:

- *Abstract Algebra*, by Dummit and Foote, will be used as a reference for the initial parts of the course. Once the course plan is finalized, there will be updates as to the most useful references to consult during the course.
- Office hour times are tentatively set for Monday 1:30pm-3:00pm and Wednesday 1:00pm-2:30pm. Updates will be posted on the course website or sent via email. Please stop by!
- You can always email me to set up a meeting.

Audit option: Please discuss an audit option with me if you are interested in it.

Grading: Grades will be assigned according to this weighting.

Problem Sets	50%
Midterm Exam	25%
Final project	25%

Problem Sets:

- Problem sets are due at the beginning of the class on the day that they are due. Problem sets are generally assigned and due weekly. I expect the deadline to be Friday, unless this presents a scheduling problem for students.
- No problem sets are accepted late without a prior arrangement. Please be in touch well in advance and as soon as possible to make an arrangement.
- **Collaboration policy:** You are encouraged to work on the problem sets with other students in the class, provided that you list who you worked with on your problem set. However, you may not copy written work from other students or any other source. Your submission should be *your own work in your own words*.
- Problem sets should be clearly written with space for comments to be made. A word processor such as LaTeX is highly recommended.

Midterm exam: There will be a midterm exam, held in class. The date will be announced in due course. In the list of goals, it will most likely fall after part 1 or part 2 of the commutative algebra section.

Final project: The final project will be either a 3–5 page paper on a topic chosen by the student and ratified by the instructor, or an in-class presentation. However, in-class presentations are not guaranteed to be an option: they will only be possible if time permits.

Expectations around class sessions: I don't expect you to follow all the details of a math lecture in real time, but I do expect you to come to lecture and then fill in the gaps in your understanding between lectures. My goal is to distill a large amount of information into a concise presentation, and you should pay attention to my advice about what's important and what isn't.

Disability resources: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890, as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course. More information may be found at <http://www.studentaffairs.pitt.edu/drs/>.

Feedback: Please feel free to come to office hours to discuss the course material or other aspects of the course. I also welcome your thoughts about how the course is going, as I want to make it as useful as possible for you.

Email communication: Students will be expected to be aware of updates about the course that are sent via email to their Pitt email account.

Academic integrity: Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, from the February 1974 Senate Committee on Tenure and Academic Freedom reported to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz or exam will be imposed. (In particular, this includes following the problem set collaboration policy above.)

If you have any questions about any of the items above, please ask.