

Math 542 - 001 Syllabus
Modern Algebra II
TR 11:00 AM - 12:15 PM in-person, Van Vleck B139

3 credits by the traditional Carnegie definition; 2×75 -minute lectures/week

Textbook: *Algebra*, Michael Artin, 2nd edition, 2010.

Recommended supplementary textbook: *Abstract Algebra*, Dummit and Foote, 3rd edition, 2003.

Pre-requisite: MATH 541

Instructor: Yousheng Shi, Department of Mathematics, shi58@wisc.edu,
Homepage:<https://people.math.wisc.edu/shi/>

Office hour: Monday 3:00-4:00pm, Wednesday 10:00-11:00am or by appointments.
The default way of office hour is via Zoom:<https://uwmadison.zoom.us/j/2398596908>. If you would like, we can also meet in my office which is Van Vleck 720.

Canvas and Piazza: Canvas will be our main media of online communication. All course materials will be posted on Canvas. There will be a Piazza course page (accessible via Canvas) to facilitate peer-group discussions regarding course content and homework problems.

Piazza Sign-Up Page: piazza.com/wisc/spring2022/sp22math542001

Piazza Course Page: piazza.com/wisc/spring2022/sp22math542001/home

Grading policy: Weekly homework accounts for 45 % of the grade. Two midterms accounts for 15 % each. The final accounts for 25 %.

Content of the course:

Ring theory (mostly review): Artin, Chapter 11 and 12.

Modules: Artin, Chapter 14.

Field Theory: Artin, Chapter 15.

Galois Theory: Artin, Chapter 16.

Homework Policy

There will be 12 homework problem sets, roughly speaking one per week. Each problems set will be announced each Thursday and will be due next Friday. The problems will be graded and the lowest one will be dropped. You are welcomed to discuss the problems with your classmates, but are supposed to think about and write up the solutions independently. Any collaboration or used resources beside the textbook must be mentioned.

Midterms and Final

The first midterm will be on Wednesday March 1st. The second midterm will be on Wednesday April 5th. Both of them will be in class. The final will be on Sunday, May 10th.

Honors program

If you would like to take the class with honor. You should let me know as soon as possible once the semester begins. There will be some extra reading and one extra assignment for students with honor.