

Abstract Algebra II

Winter 2016

Course Instructor

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Office Hours: M 3-4, W 3-4, R 11-12, 3-4

Learning Outcomes

This course is a continuation of ma312: *Abstract Algebra I*. With an understanding of the theory of groups in hand, this semester will focus on the study of rings and fields. The eventual goal of this course is *Galois Theory*, which is a beautiful interaction between the concepts of groups, rings, and fields. By the end of this course a student will be able to *understand* and *apply*

- general rings, polynomial rings, homomorphisms and ideals
- factorization in rings
- general fields, field extensions, number fields and finite fields
- ruler and compass constructions
- Galois Theory

Course Meeting Times

MWF 11-11:50

LRC 235B

Course Webpage

The course webpage will be on the *NMU EduCat* system, which can be accessed at <https://educat.nmu.edu>.

Textbook

Michael Artin, *Algebra*, 2nd ed., Prentice Hall, 2011.

Grading Scheme

Problem Sets (30%), Tests (35%), Final (35%)

Problem Sets and Tests

There will be 3 tests evenly spaced throughout the semester. There will also be problem sets posted to *EduCat* with evenly spaced due dates throughout the semester. These problem sets are the "backbone" of the class. We will sometimes devote entire classes to working together on the problem sets.

Advice

Learning is an active *process*, and it is critical that you be respectful of this process. I will be working very hard to make this class exciting, engaging and clear, but you will have responsibilities as well. It is *very important* that you attend every class. You need to be *present* and *engaged*. When learning math, you cannot simply sit back and let the information soak in; you must invest your time, little by little, struggling with concepts and problems, making mistakes, and then finding the solutions.

Accessibility

If you have a need for disability-related accommodations or services, please inform the *Coordinator of Disability Services* in the Dean of Students Office located in 2001 Hedcock (906-227-1700). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation.

This syllabus is subject to change with notice.
