

MAT 632 – Introduction to Algebra II – Spring 2015

Professor: Claudia Miller
Office: 300A Carnegie Hall
Phone: 443-1493
Email: clamille@syr.edu
Hours: tba, and also by appointment.
Web: <http://clamille.mysite.syr.edu/632.html>

Prerequisite: MAT 631

Text: Dummit and Foote, *Abstract Algebra*, 3rd ed, Wiley (on reserve in the library). However, your main source will be the lecture notes from class.

Topics: Rings, modules, and Galois theory. More precisely, the material corresponds to most of the material in the following chapters of Dummit and Foote.

CH 7 Ring theory
CH 8 EDs, PIDs, UFDs
CH 9 Polynomial rings
CH 10 Module theory
CH 12 Modules over PIDs
CH 13 Field theory
CH 14 Galois theory

I plan to cover the material on rings and modules before spring break and that on field theory, including Galois theory, after spring break.

Homework: The problem sets are crucial for your development. You are welcome to talk to me about them!

- (1) You may work on them jointly, but only if it is a truly collaborative, equal effort.
- (2) Either way, the write-ups that you hand in must be your own version of the solutions and written in your own words.
- (3) Homework is worth little, so it is more important that you are using them to further your development and test and train your mind, rather than to accrue points.
- (4) In fact, if you work more independently, you will get the most effective learning experience out of them and likely do better on the exams (and the prelim).
- (5) Submitting solutions obtained from sources, such as the internet, books, or other persons, is considered an academic integrity violation.

Grading/Exams: There will be two midterm exams and a cumulative final exam. No make-up exams will be given.

Exams	25% each
Homework	20%
Final Exam	30%

Learning Outcomes: Goals include improvements in understanding and writing rigorous mathematical proofs at the advanced level and learning of algebraic theory that forms part of the core of what any good mathematician should know.

Students with Disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Religious Observances Policy: SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. An online notification process is available through MySlice (Student Services — Enrollment — My Religious Observances) from the first day of class until the end of the second week of class.

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The University policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>.