Class Meetings: MW 3:30-4:45 pm in EMS E449, September 5 to December 12
[Thanksgiving break November 21 – 25; final exam December 18]

Instructor: Allen Bell
Contact information: EMS E402 414-229-5264 adbell@uwm.edu

D2L & Canvas: I don’t know yet if the course will use D2L or Canvas; currently both
pages exist. For D2L, go to http://d2l.uwm.edu/, then log in and find Modern Algebra
w/Applications (Math 431). For Canvas, go to https://uwm.educanvas/, log in and
navigate.

This is an open source textbook. Its home is at http://abstract.pugetsound.edu/;
online and downloadable versions are available there. You can also buy a printed and
bound version from the bookstore or other sources. Note: The author updates the book
yearly. Currently the 2017 version is available and I intend to use that version; the web
page indicates the 2018 version will be available some time in August.

We will begin with Chapters 1–6 and 8 and then go on to other chapters. Topics will
include basics such as properties of the integers, definition and examples of groups, cyclic
groups, Lagrange’s Theorem, error-correcting codes, symmetry groups, groups acting on
sets and counting problems, rings, polynomials, and factorization.

Office hours: My normal office hours will be MW 2:30-3:30 pm, right after class, and T
11 am - noon; on most Tuesdays, I will be available until 1:45 pm. My schedule is quite
variable and busy, so some of the above times I may be unavailable. However, I will also
be available at many other times. You can see me by appointment or any time you can
find me in my office; do not hesitate to talk to me.

Investment of time: A typical student should expect to spend 150 minutes per week
in class and at least six hours per week studying and doing problems. The amount of
time you need to spend outside of class may vary considerably from this estimate.
When taking notes in class and when reading the text or any other material, try to work
actively. Anticipate what the next step will be and attempt to come up with your own
proofs and your own solutions.

Other information: Links to UWM policies relevant to this class can be found at
df. Note particularly the statements on academic misconduct and discriminatory con-
duct, as well as on students with disabilities.

Please turn off and put away cell phones during class.

If you have any special requirements or concerns regarding this course, please let me
know as soon as possible. Sunday, November 11 is the last day to drop the class with
a W on your transcript. For other important dates, see https://uwm.edu/registrar/
dates-deadlines/.
Grades: Your grade will be based on examinations and homework, and possibly quizzes and presentations. The grading scale will be determined based on the class performance (i.e., there will be a curve). Here is an example of one weighting system for grades I have used in the past: homework counts for 20% of your grade, the two midterms 20% each, and the final exam 35%, with the remaining 5% for class participation and other activities.

Homework: Homework will be assigned, collected, and graded regularly. There are many problems and exercises in the text, and it is vital that you work on a wide selection of them, including those that are not assigned to be turned in. It is impossible to really learn mathematics without doing problems!
We will discuss homework problems, graded and ungraded, in class whenever you have questions, and I encourage you to come to my office to talk about problems. You are free to discuss homework problems with other students, except that homework that is handed in for a grade must be your work. Please remember that if you don’t do it yourself, you won’t learn it.
There are answers or hints in the back of the book for some problems.

Exams: There will be two midterm exams during the semester and a comprehensive in-class written final exam. The first midterm will be on Wednesday, October 10. The second midterm will be on Monday, November 19 (before Thanksgiving). The final exam will take place on Tuesday, December 18 from 10:00 am to noon. You cannot take the final at any other time.
A make-up exam will not be given without a very good, documented reason that is acceptable to me. If you cannot come to an exam (for that very good reason), please let me know as far in advance as possible: you may call me, email me, or leave a message at the Mathematics office, 414-229-4836.