

# Math 3613: Introduction to Modern Algebra

## Section 1

MWF 9:30-10:20, HSCI 129

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**Web page** <https://math.okstate.edu/people/mermin/3613/>

**Office Hours** TBA or by appointment.

**Subject matter** This course serves as an introduction to reading and writing formal mathematics, especially logic, set theory, and proof. While much of the content is drawn from modern algebra (the study of structured sets with well-behaved operations such as addition and multiplication), the course is best understood as an introduction to the communication of mathematics. We will learn to speak and write precisely, and to structure and critique a mathematical argument.

**Relationship to other courses** Math 3013 (Linear Algebra) is a prerequisite for this class. You should be comfortable with the idea of mathematical proof.

**Textbook** There are two textbooks for this course.

Through approximately the first exam, we will use *How To Prove It: A Structured Approach* (second edition) by Daniel Velleman.

For the remainder of the course, we will use *Abstract Algebra: An introduction* (third edition) by Thomas Hungerford.

**Grading** Your course grade will be out of 600 points, assigned as follows:

- 150 Midterm, Friday, February 12
- 150 Midterm, Friday, March 11
- 150 Final, Friday, May 6, 8:00-9:50 am
- 150 Homework, quizzes, and classwork

A total score of 540 or above will guarantee you an A; a total score of 480 will guarantee a B, and so on.

**Homework** A small written assignment will be due at the end of class nearly every class day. It must be written legibly on  $8\frac{1}{2} \times 11$  paper; your name and the due date should appear prominently. When you turn in multiple pages, they should be stapled together.

**Late policy.** Because the course builds on itself, it is important that you not fall behind. Thus, late homework will not be accepted. Nevertheless I understand that outside life makes asymmetric demands on your time, so I will drop your four lowest homework grades.

If you have other commitments that will make this late policy an undue hardship, please meet with me during the first week or two to discuss an appropriate accommodation.

**Collaboration.** Mathematics is a collaborative venture; you are encouraged to work together with friends and/or classmates on the homework. However, you must **write up your work yourself** and **acknowledge anyone who helped you**.

**Quizzes and in-class work.** Periodically I will assign questions to be solved in small groups during class. I prefer not to collect and grade these problems, but reserve the right to do so if circumstances warrant.

Similarly, I prefer to avoid quizzes in this class, but reserve the right to hold them should they become necessary.

**Illness policy** If you cannot attend one of the exams due to illness or another emergency, you must provide documentation to arrange a make-up.

If you cannot attend a regular class due to illness or another emergency, no documentation is necessary. If you aren't sure whether or not you're too ill to attend class, please see a doctor. If you need to miss *several* classes, let me know as soon as possible, so that we may plan how to accomodate the situation.

**Academic integrity** Don't cheat, or help other students cheat. Please read my "rules for written assignments" at

<https://math.okstate.edu/people/mermin/3613/airules.pdf>

If, after reading this, you aren't sure whether or not something is allowed, ask me before you try it.

Don't violate academic integrity in any other way, either. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in your being sanctioned according to the OSU academic integrity process. If you have further questions, contact the Office of Academic Affairs, 101 Whitehurst, 405-744-5627, <http://academicintegrity.okstate.edu>.

**Links and attachments** The course syllabus consists of three documents; please read them all.

This course information sheet may be found at

<https://math.okstate.edu/people/mermin/3613/courseinfo.pdf>

The document on academic integrity is available at

<https://math.okstate.edu/people/mermin/3613/airules.pdf>

Finally, the OSU syllabus attachment is on the web at

<http://academicaffairs.okstate.edu/sites/default/files/documents/Spring 2016 Syllabus Attachment.pdf>

This has a lot of important information, including instructions about disability accomodations. Please contact me privately during the first week of the course if you need accommodations as the result of a disability.