

# MATH 223: LINEAR ALGEBRA

MW 1:20 PM - 2:40 PM, Exley 141

Spring 2017

Instructor: Alyson Hildum  
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Office: Exley Science Center 643  
Office phone: (860) 685-2090  
Office hours: Wednesday 11:00 AM - 11:50 AM,  
Thursday 1:30 PM - 2:30 PM,  
and by appointment

## Teaching Assistant(s).

Nikku Chatha

Email: pchatha@wesleyan.edu

Recitation Session: TBD

**Text.** *Linear Algebra Done Right*, Third Edition by Sheldon Axler.

An electronic copy of this textbook is freely available to download from the Springer website.

**Moodle.** All course materials for Math 223 will be available online on Moodle. This includes any course announcements, homework assignments, and midterm exam solutions.

**Syllabus.** This course will be a more theory-based approach to linear algebra. Whereas Math 221 (Vectors and Matrices) probably jumps straight into matrix algebra, we will study matrices from the more abstract notion of a linear vector space. Time permitting, I would like to get through Chapters 1-3, 4-7, and 10. Some of the major topics we will study include axioms of vector spaces, linear independence, spans and bases, dimension, linear maps, linear operators, eigenvalues and eigenvectors, inner product spaces, orthonormal bases, the Spectral Theorem, and trace and determinants.

**Classroom expectations.** In order to ensure that we cover all planned material and our course runs smoothly, please abide by these expectations:

- Attend every class. If you will be absent due to illness or scheduled conflict, please notify me in advance.
- Arrive for class a few minutes early so that we may all start on time.
- ASK QUESTIONS!
- Please keep your cell phones on silent and put away unless I tell you otherwise.
- Food is permitted as long as it will not disrupt others.

**Disability Resources.** Wesleyan University is committed to providing reasonable accommodations to students with documented disabilities. Students, however, are responsible for registering with Disabilities Services, in addition to making requests known to me in a timely manner. Note that accommodations are not provided retroactively.

If you believe that you need accommodations for a disability, please contact Dean Patey in Disability Resources, located in North College, Room 021, or call (860) 685-5581 for an appointment. See <http://www.wesleyan.edu/studentaffairs/disabilities/Student/index.html> for more information.

If you require accommodations in this class, please make an appointment with me as soon as possible, so that appropriate arrangements can be made.

**Office hours.** You are encouraged to use my office hours whenever you have questions about the course material. Sometimes one-on-one conversations with me can save you hours of study time on your own! If you can't attend office hours, don't hesitate to email me at ahildum@wesleyan.edu to ask for an appointment for another time.

**Recitation sessions.** There will be an optional recitation session held by our course assistant, Nikku, once a week. The time and location will be determined shortly.

**Math Workshop.** The Math Workshop is now located in the basement of the Science Library, room 88. It is open Sunday through Thursday from 7-10 pm and Monday through Friday from 11:45 am - 1:15 pm. More information can be found here:

[http://www.wesleyan.edu/mathcs/math/math\\_workshop.html](http://www.wesleyan.edu/mathcs/math/math_workshop.html)

There are always two staff members on duty, who may be either experienced undergraduates or math graduate students. This is a drop-in tutoring service, FREELY available to all members of the Wesleyan community. Staff members provide a friendly, relaxed atmosphere while answering questions about mathematics. The workshop is a good place to go when you get stuck on your math homework.

**Homework Assignments.** Occasionally I will ask you to read or review a section of the textbook before class. Readings will be posted to Moodle so be sure to log on frequently to see any updates.

We will have weekly written assignments, usually consisting of problems from the textbook. I may occasionally supplement the textbook questions with my own. Because we are learning a theory-based approach to linear algebra, I will often ask you to prove certain statements in addition to solving more traditional, computational problems. It's quite possible you will need several tries at a solution before you solve a problem, and therefore you should start your homework as early as possible to give yourself a chance to finish it on time. Your homework will be graded not only for correctness but for clarity, so all of your assignments should have a "final draft" quality to it.

**Late homework policy:** You are allowed a 4-day grace period on any of your homework assignments. This means you can be 4 days late on one assignment, or 1 day late on 4 assignments, etc. Please inform me ahead of time if you plan to use any of these days.

**Exams.** There will be two midterm exams and a final exam.

- Midterm 1: March 1
- Midterm 2: April 19
- Final Exam: Tuesday, May 16: 9:00 AM – 12:00 PM\*\*

The midterm exams will be held during class time, in Exley 141. The final exam time is scheduled by the registrar. PLEASE NOTE that this date and time is *tentative*, to be finalized after spring break. If you have an academic conflict with a midterm exam (such as a class, lab, or another exam), inform me **at least one week before the exam**.

**Grades.** Your grade in the course will be based on the following:

- (1) Homework (25% of your grade).  
All homework assignments are weighted equally and averaged.
- (2) Participation (5% of your grade).
- (3) Two midterm exams (each 20% of your grade).
- (4) Final exam (30% of your grade).

### Academic Integrity.

I encourage you to discuss homework problems and proofs with your classmates, but **you must write up your own proofs and other solutions in your own words.** If you do choose to work together, write your collaborators' names at the top of your paper.

You are expected to follow the University's policy on academic integrity. Any violation of the Student Honor Code will be referred to the Honor Board, without exception. The Honor Code can be found in the Student Handbook. Before you hand in an assignment or a test, pledge the following:

*In accordance with the Honor Code, I affirm that this work has been completed without improper assistance. All content taken from other sources has been properly acknowledged.*