

# Matrix Algebra

## Math 308 M Winter 2020

**Instructor:** Josh Southerland

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**Office:** Padelford C-552

(specify **Math 308** in all correspondence)

**Course Website:** [sub.mersion.cc/m308/m308\\_2020A.html](http://sub.mersion.cc/m308/m308_2020A.html)

**Alternatively access the website via:** <http://www.math.washington.edu/~jsouther>

**Office Hours:** TBD

**Text and Webassign:** The text for the course is *Linear Algebra with Applications, second edition* by Jeffrey Holt. You may purchase the text at the University Book Store. You are not required to purchase a hard copy of the text. *Webassign* access (see next paragraph) includes an electronic copy of the text.

You will need access to *Webassign* to complete homework assignments. If you've not yet purchased a *Webassign* access code, follow the link on the course website to do so.

**Course Summary:** This is a first course in linear algebra. It is truly remarkable how ubiquitous linear algebra is throughout math and sciences: from cryptography to graph theory, from machine learning to research mathematics. Whether you are an aspiring computer scientist, mathematician, physicist, biologist or engineer, the techniques we will learn in this class are a fundamental component of your studies. Topics include solving linear systems of equations, span and linear independence of vectors, linear transformations, inverses, subspaces, change of basis, the determinant function, eigenvalues and eigenvectors, and diagonalization. Feel free to visit the course materials webpage for additional information (<https://sites.math.washington.edu/m308/>).

**Grading:** Your grade will be made up of

Webassign	5%
Conceptual Problems	10%
Exam I	25%
Exam II	25%
Final Exam	35%

**Homework:** Each week, beginning the second week of the quarter, you will get a homework email detailing all that is due that week. Webassign homework assignments will be assigned and collected via *Webassign*. This portion of your homework will generally be due at 11:00pm on Tuesday and Thursday, and occasionally Sunday (except possibly for exam weeks—see the course schedule for due dates). In addition to Webassign homework, you will also be assigned a certain number of Conceptual Problems that will be due **in class** on the dates specified in the homework emails. **No extensions will be given to anyone for any reason.** You may miss 10% of the total of homework points available for the quarter without penalty to your grade.

**Exams:** You will be allowed to use a TI-30X IIS scientific calculator and one 8.5×11 sheet of **handwritten** notes for the exams. **No other calculators or electronic devices will be allowed** (e.g. no cell phones, no laptops, no palm pilots, no pagers). You may not share a calculator or a note sheet with another student on an exam.

**Exam Dates:**

Exam I	Friday, January 31	in class
Exam II	Friday, February 21	in class
Final Exam	Monday, March 16	in class

**Make-Ups:** No extensions will be granted for homework to anyone for any reason. No exceptions. Make-up exams will not be given. If you miss an exam due to unavoidable, compelling, and well-documented circumstances (e.g., illness, transportation emergency), **contact Josh immediately.**

**Resources for Students with Disabilities:**

The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation contact the Disability Services Office at least ten days in advance at: 206-543-6450/V, 206-543-6452/TTY, or [dso@uw.edu](mailto:dso@uw.edu).

**Religious Accommodations**

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy:

<https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/>  
Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form:

<https://registrar.washington.edu/students/religious-accommodations-request/>