

# MATH 208: Matrix Algebra with Applications

**Course Description:** Systems of linear equations, vector spaces, matrices, subspaces, orthogonality, least squares, eigenvalues, eigenvectors, applications. For students in engineering, mathematics, and the sciences.

**Text:** Linear Algebra with Applications, Second Edition, by Jeffrey Holt

**Learning Objectives:** By the end of this course, students will demonstrate the ability to:

- 1.1 lines and linear equations
- 1.2 linear systems and matrices
- 2.1 vectors
- 2.2 span
- 2.3 linear independence
- 3.1 linear transformations
- 3.2 matrix algebra
- 3.3 inverses
- 4.1 intro to subspaces
- 4.2 basis and dimension
- 4.3 row and column spaces
- 4.4 change of bases
- 5.1 the determinant function
- 5.2 properties of the determinant
- 6.1 eigenvalues and eigenvectors
- 6.2 diagonalization

## Content:

- Assignment 1: due Oct 4 at 11:59pm
- Assignment 2: due Oct 11 at 11:59pm
- Assignment 3: due Oct 18 at 11:59pm
- Assignment 4: due Oct 25 at 11:59pm
- Assignment 5: due Nov 1 at 11:59pm
- Assignment 6: due Nov 8 at 11:59pm
- Assignment 7: due Nov 15 at 11:59pm
- Assignment 8: due Nov 29 at 11:59pm

**Grading:** Grades are determined by scores on WebWork (5%), Written Homework (9%), Quizzes (4%), Midterm 1 (20%), Midterm 2 (20%), and Final Exam (42%).

## Academic Misconduct

The University takes academic integrity very seriously. Behaving with integrity is part of our responsibility to our shared learning community. If you're uncertain about if something is academic misconduct, ask me. I am willing to discuss questions you might have.

Acts of academic misconduct may include but are not limited to:

- Cheating (working collaboratively on quizzes/exams and discussion submissions, sharing answers and previewing quizzes/exams)
- Plagiarism (representing the work of others as your own without giving appropriate credit to the original author(s))
- Unauthorized collaboration (working with each other on assignments)

Concerns about these or other behaviors prohibited by the Student Conduct Code will be referred for investigation and adjudication by (include information for specific campus office).

Students found to have engaged in academic misconduct may receive a zero on the assignment (or other possible outcome).

The University of Washington Student Conduct Code (WAC 478-121) defines prohibited academic and behavioral conduct and describes how the University holds students accountable as they pursue their academic goals. Allegations of misconduct by students may be referred to the appropriate campus office for investigation and resolution. More information can be found online at <https://www.washington.edu/studentconduct/>

### **Accommodation**

Your experience in this class is important to me. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you have already established accommodations with Disability Resources for Students (DRS), please activate your accommodations via myDRS so we can discuss how they will be implemented in this course.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), contact DRS directly to set up an Access Plan. DRS facilitates the interactive process that establishes reasonable accommodations. Contact DRS at [disability.uw.edu](http://disability.uw.edu).

### **Religious Accommodation**

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/) (<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 \(https://registrar.washington.edu/students/religious-accommodations-request/\)](https://registrar.washington.edu/students/religious-accommodations-request/).

### **Medical Notes**

Students are expected to attend class and to participate in all graded activities, including midterms and final examinations. To protect student privacy and the integrity of the academic experience, students will not be required to provide a medical excuse note to justify an absence from class due to illness. A student absent from any graded class activity or examination due to illness must request, in writing, to take a rescheduled examination or perform work judged by the instructor to be the equivalent. Students are responsible for taking any number of examinations for which they are scheduled on a given day and may not request an adjustment for this reason alone.

### **Inclusivity**

Among the core values of the university are inclusivity and diversity, regardless of race, gender, income, ability, beliefs, and other ways that people distinguish themselves and others. The [Diversity webpage](#) provides an overview of the ways the university addresses this value. Inclusivity applied to teaching a course means that assignments and activities should be accessible to all students, including class trips or research in the field. In such cases, alternative assignments should be available to those who need them.