

Matrix Algebra MATH 160 Syllabus
Department of Mathematics and Statistics
Hunter College

Instructor: Connor Song
Office Hours: Monday, 4:05 p.m.-5:05 p.m. in HE 924
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Textbooks: Linear Algebra with Applications by Steven Leon

Grade: 10% Homework and Class participations.
90% Midterms and Final

Homework will be self-graded. Your tests will be similar to class materials and your homework.

We will have three exams and your final. The final exam has twice the weight as your other exams. The lowest exam will be dropped. If the final is the lowest, it will only count once towards your overall grade.

For CR/NC option, you have to attempt to finish all class work and **MUST HAVE AT LEAST TWO EXAMS WITH GRADES of 40 OR BETTER BEFORE THE FINAL**. Students on probation are not eligible for CR/NC.

Tentative Schedule:

1. MATRICES AND SYSTEMS OF EQUATIONS

- System of linear equations
- Row echelon form
- Matrix algebra
- Elementary matrices

2. DETERMINANTS

- The determinant of a matrix
- Properties of determinants

3. VECTOR SPACES

- Definition and examples
- Subspaces
- Linear independence
- Basis and dimension

4. ORTHOGONALITY

- The scalar product in \mathbb{R}^n

5. EIGENVALUES

- Eigenvalues of a square matrix. The characteristic polynomial and the characteristic equation. Eigenvectors; Finding the eigenvalues and the corresponding eigenvectors of a matrix.

❖ Hunter College Policy on Academic Integrity

“Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.”

❖ ADA Policy (Suggested language from the Office of AccessABILITY)

”In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.”

❖ Hunter College Policy on Sexual Misconduct

“In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College’s Public Safety Office (212-772-4444).
- b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College’s Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>