

INFORMATION SHEET FOR CPMA 512 - LINEAR ALGEBRA

INSTRUCTOR: Dr. Mark Mazur

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OFFICE HOURS: Monday & Wednesday: 11 A.M. to 12 P.M.
2 P.M. to 3 P.M.

Or by appointment

CLASS MEETINGS: Wednesday - 6 to 8:40 P.M.

CLASSROOM: 721 Fisher Hall

TEXT: Matrix Analysis and Applied Linear Algebra by Carl D. Meyer

GRADING: Your final grade will be based on homework, a midterm exam, and a comprehensive final exam. Homework will count 30 %, the midterm will count 30 %, and the final exam will count 40 % of your final grade. I reserve the right to make any portion of the exams take-home exams. The comprehensive final exam will be given on Wednesday, December 20 at 6 PM. Please note that **NO MAKE-UP EXAMS WILL BE GIVEN**. You will receive a zero for each missed exam. In the event of serious illness, the student must notify the professor immediately and must provide an original, written, verifiable excuse. Final grades will be assigned according to the grading scale:

A: 90- 100

B: 80 - 90

C: 70 - 80

D: 60 - 70

F: Below 60

All problems submitted for homework will be graded and returned.
NO LATE HOMEWORKS WILL BE ACCEPTED.

ATTENDANCE: You are expected to attend class, and attendance will affect your grade only in borderline cases.

ACADEMIC HONESTY: Each student's grade should reflect only that student's achievement. Thus cheating, plagiarism, or assisting or allowing some other to violate academic honesty are each grounds for receiving a grade of "F" FOR THE COURSE.

DISABILITIES: Students with documented disabilities are entitled to reasonable accommodations if needed. If you need accommodations, please contact the Office of Freshman Development and Special Student Services in 309 Duquesne Union (412-396-6657) as soon as possible. Please also contact the instructor. Accommodations will not be granted retrospectively.

COURSE AIMS AND CONTENT:

The purpose of this course is to introduce students to the subject of linear Algebra. Our aim in the course is to learn how to use linear algebra to solve problems and to discuss some of the theory of linear algebra. One of the goals in the course is that the students become more proficient at writing mathematical proofs.

The major topics in linear algebra are systems of linear equations, matrices and matrix theory, vector spaces, subspaces, linear independence and linear dependence, linear transformation, determinants, and eigenvalues and eigenvectors.

Our goal is discuss material from Chapters 1 – 4 and select topics from Chapters 5 – 7, depending upon time.

TOPICS:

Chapter 1: Linear Equations
Sections 1.1 – 1.3

Chapter 2: Rectangular Systems and Echelon Forms
Sections 2.1 – 2.5

Chapter 3: Matrix Algebra
Sections 3.1 – 3.7, 3.9, 3.10 (if time)

Chapter 4: Vector Spaces
Sections 4.1 – 4.4, 4.7, 4.8 (if time)

Chapter 5: Norms, Inner Products, and Orthogonality (only if time)
Sections 5.1 – 5.4

Chapter 6: Determinants
Sections 6.1 – 6.2 (parts)

Chapter 7: Eigenvalues and Eigenvectors
Sections 7.1, 7.2 (if time)

