

MATH 3720 - Linear Algebra and Matrix Theory

Summer 2026 Syllabus, Section 01, CRN 31030,

Credit hours: 3

Instructor

Jamal Tartir

Professional Qualifications:

Doctor of Philosophy in Mathematics, Ohio University

Master of Arts in Mathematics, Miami University

Bachelor of Arts in Mathematics and Management with a concentration in Finance, Hiram College

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Additional Contact Methods:

Preferred Contact Method: Email

Communication Expectations:

Normal response time is 1 business day or less.

Course Description

3720. Linear Algebra and Matrix Theory. Matrices; matrix operations; linear transformations; applications. Prereq.: "C" or better in either MATH 1570, MATH 1571, MATH 1571H, MATH 1581, MATH 1581H, or MATH 1585H. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	Linear Algebra: A Modern Introduction	David Poole	any edition

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
5/11	Chapters 1 – 7.	Vectors and Matrices	
5/18	Chapters 8 – 13	Matrix operations, inverses, and determinants	
5/25	Chapters 14 – 16	Vector spaces, subspaces, and the null space	
6/1	Chapters 17 - 21	Span, linear independence, basis and dimension, orthogonality	
6/8	Chapters 22 – 23	Rank, nullity, orthogonal complements, and systems of linear equations	
6/15	Chapters 24 – 26	Cramers Rule, factorizations	
6/22	Chapters 27 – 28	Linear transformations, eigenvalues, eigenvectors	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.