

(—; 3-0-0)

Introduction to Linear Algebra

MATH-112*

A brief introduction to linear algebra, largely motivated by applications. Topics include: solving linear equations, linear maps, matrix algebra, eigenvalues and eigenvectors, linear recursion equations. The analysis of iterated linear maps by using eigenvalues and eigenvectors is applied to examples in Economics and Population Biology.

Textbook: *Linear Algebra with Applications*, 3rd Edition
by O. Bretscher (Pearson)

Prerequisite: Some OAC Mathematics, preferably algebra *and* geometry.

Exclusions: MATH-110, 111.

Instructor: L. Roberts

Evaluation:	Final Examination	60%
	Midterm	20%
	Homework	20%

Outline:

- Matrices and Solving Equations
- Linear Recursion Equations
- Iterated Systems and Eigenvectors
- Linear Transformations
- Determinants