

MATH 210 : Linear Algebra

Credits 5

Quarter Offered Spring (even year)

This course covers the following topics: linear equations, matrix algebra, use of technology, rigorous proof, vector spaces, linear independence, basis, orthogonality, linear transformations, eigenvalues/ vectors, Gram-Schmidt, least squares regression, and applications. This class may include students from multiple sections. (Quantitative Skills, Elective)

Prerequisites

2.0 or higher in [MATH&152](#)

Course Outcomes

Discuss mathematics verbally, algebraically, numerically, and graphically in a group setting.

Write detailed solutions using appropriate mathematical language.

Apply appropriate mathematical concepts to various problems.

How do we achieve these goals?

For #1, small discussion groups provide students with regular opportunities to discuss and present mathematics both formally and informally.

For #2, students will be provided with regular opportunities to write detailed solutions on discussion sheets, homework, assessments/exams, computer algebra systems, etc.

We approach #3 in two stages:

Fundamentals: These are the building blocks of more complex concepts. We discuss and practice these in class.

Synthesis: At this next level, small discussion groups are used to focus on combining the building blocks into more complex techniques by breaking problems in smaller pieces, then solving each and combining the results.