

# MATH 235

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## **MATH 235 Linear Algebra**

3 Credits

Mathematics 235 is an introductory course on vectors, matrices and linear equations with special emphasis on engineering applications. Topics in this course include: systems of linear equations, vector and matrix notation and operations, Gaussian elimination, determinants, vectors in n-dimensional space, dot and cross products, linear combinations of vectors, independence, subspaces, the concepts of basis and dimension, orthonormal bases for subspaces, the Gram-Schmidt algorithm, orthogonal matrices, eigenvalues, and eigenvectors, diagonalizable matrices, and symmetric matrices. Applications discussed include: least square, the pseudo-inverse, Linear transformations, change of basis, application to computer graphics and application to stochastic matrices.

### **Prerequisites**

Precalculus 12 or Equivalent

### **Transfer Credits**

Explore transfer credit opportunities by visiting the BC Transfer Guide (<http://www.bctransferguide.ca>)

