UNIVERSITY OF CALGARY

FACULTY OF SCIENCE
Department of Mathematics and Statistics

MATHEMATICS 013

"EIGENVALUES AND EIGENVECTORS"

Calendar Description: E(8 hours)

A supplement to Mathematics 211 material for students who require Mathematics 221 for their programs. Could also serve as a review of these particular topics for students who have completed Mathematics 221 or equivalent.

Note: Open to students with credit in Mathematics 211 or 221 or equivalent.

Syllabus

Topics	**Number of Hours**
Formal Definitions: A$\mathbf{x}=\lambda\mathbf{x}$, algebraic and geometric multiplicities, dominant eigenvalue, linear independence, diagonalizability	2
Methods of Calculation: characteristic equations, row and column reduction methods, triangular forms, real and complex solutions, properties	3
Applications: Diagonalization, similar matrices, matrix powers, three term recursions.	3
TOTAL HOURS	**8**

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