Mathematics 213	Honours Linear Algebra I

Systems of equations and matrices, vectors, linear transformations, determinants, eigenvalues and eigenvectors.

Course Hours: H(3-1T-1)

Prerequisite(s): A grade of 70 per cent or higher in Pure Mathematics 30.

Antirequisite(s): Credit for Mathematics 213 and either 211 or 221 will not be allowed.

Syllabus

Topics	Number of Hours
Systems of linear equations, matrices, reduced row echelon form matrix multiplication, inverses.	8
Vector spaces, subspaces, bases and dimension.	4
Linear transformations, kernel and image, isomorphism, matrix representation, linear functionals.	8
Determinant functions, permutations, uniqueness of determinants, properties of determinants.	8
Eigenvalues, eigenvectors, characteristic polynomials.	6
Optional topics.	2
TOTAL HOURS	36

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