UNIVERSITY OF CALGARY

FACULTY OF SCIENCE
Department of Mathematics and Statistics

Mathematics 411   Linear Spaces with Applications

(see Course Descriptions for the applicable academic year: http://www.ucalgary.ca/pubs/calendar/)

Syllabus

Topics	Number of Hours
Fields, algebras, vector spaces	3
Elementary canonical forms: invariant subspaces, simultaneous diagonalization, direct-sum decompositions, invariant direct sums.	8
Rational and Jordan forms.	6
Inner product spaces, adjoint, Hermitian, unitary and normal operators.	8
Operators on inner product spaces, form, the Spectral theorem.	6
Bilinear and quadratic forms.	5
TOTAL HOURS	**36**

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2009:07:01
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