

EFFECTIVE: SEPTEMBER 2004 CURRICULUM GUIDELINES

А.	Division:	Instructional		Effective Date:		September 2004	
B.	Department / Program Area:	Mathematics/ Faculty of Science &	& Technology	Revision	X	New Course	
				If Revision, Section(s) Revised:		C, F, H, J, M	
				Date of Previous Revisio Date of Current Revision		June 28, 2002 September 2004	
C:	Math 2232	D :	Linear Algebra			E: 3	
	Subject & Course No.		Descriptive Title		Sen	Semester Credits	

F: Calendar Description:

Math 2232 is a one semester introductory course designed to provide a solid foundation in the mathematics of linear algebra. This course is often the first course in abstract mathematics and the student is taught how to prove theorems. Topics include th

M: Course Objectives / Learning Outcomes

Upon completion of Math 2232 the student should be able to:

- solve systems of n equations in m unknowns using Gauss-Jordan elimination and Gaussian elimination
- prove and apply the basic properties of matrix addition, scalar multiplication, matrix multiplication, the transpose of a matrix and the inverse of a matrix
- express a system of equations as a matrix equation and vice versa
- determine the inverse of a matrix by Gauss-Jordan elimination and use the inverse to find the unique solution of a system of equations
- understand the terms square matrix, symmetric matrix, zero matrix, diagonal matrix, triangular matrix and identity matrix
- evaluate the determinant of an $n \times n$ matrix
- prove and apply the basic properties of the determinant of a matrix
- understand the terms singular, non-singular and invertible as applied to a matrix
- determine the adjoint of a matrix and use the adjoint to calculate the inverse of a matrix
- solve systems of equations using Cramer's Rule
- prove, apply and explain the basic properties of vector addition and scalar multiplication on the vector space -

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