

Math 2700, material for final exam

- 1.1: Systems of linear equations
- 1.2: Row reduction and echelon forms
- 1.3: Vector equations
- 1.4: The matrix equation $A\mathbf{x} = \mathbf{b}$
- 1.5: Solution sets of linear systems
- 1.6: Applications to input/output models and network flow
- 1.7: Linear independence
- 1.8: Linear transformations
- 1.9: The matrix of a linear transformation

- 2.1: Matrix operations
- 2.2: The inverse of a matrix
- 2.3: The Invertible Matrix Theorem

- 3.1: Introduction to determinants
- 3.2: Properties of determinants

- 4.1: Vector spaces and subspaces
- 4.2: Null spaces, column spaces; kernel and range of a linear transformation
- 4.3: Linearly independent sets; Bases
- 4.4: SKIP!
- 4.5: The dimension of a vector space
- 4.6: Rank and the Rank Theorem (SKIP: row space)

- 5.1: Eigenvectors and eigenvalues
- 5.2: The characteristic equation
- 5.3: Diagonalization