

Exam 2 - topics

Topics Covered: Sections 1.7 – 1.9, 2.1 – 2.5, 3.1 – 3.2

Exam Date: Tuesday, Oct 15

Know the following definitions:

- Linear Independence/Dependence
- Linear Transformation
- Block matrix
- Determinant of a matrix

Know how to:

- Determine whether a set of vectors is linearly independent
- Determine whether a mapping is a linear transformation (or one-to-one or onto)
- Find the standard matrix of a linear transformation
- Perform matrix operations (ie: addition, scalar multiplication, multiplication, transpose, inverse)
- Perform matrix operations on block matrices
- Find the inverse transformation of a linear transformation
- Find the LU factorization of a matrix
- How to use either the inverse matrix or LU factorization to solve a matrix equation

Know the main properties (ie: important theorems)

- Note: the big one is the main theorem of section 2.3

Sample Questions:

- Look over homework questions
- See sample questions (upcoming)