## Examples of Additional Topics

- Complex vector spaces
- Gram-Schmidt process
- Orthogonal Matrices
- LU factorization
- QR factorization
- Markov Chains
- Principal Component Analysis
- Least Squares Approximation
- Distance between points, lines, and planes
- Matrix Block Multiplication
- Cramer's Rule
- Iterative Methods
- Singular Value Decomposition
- Cayley-Hamilton Theorem
- J ordan Canonical Form and Rational Canonical Form
- Linear Differential Equations as the kerne of a linear transformation

