

successful completion of Higher Math a student will be able to

- Solve systems of linear equations,
- Recognize the concepts of the terms span, linear independence, basis, and dimension, and apply these concepts to various vector spaces and subspaces,
- Use matrix algebra and the related matrices to linear transformations,
- Compute and use determinants,
- Compute and use eigenvectors and eigenvalues,
- Use technological tools such as computer algebra systems or graphing calculators for visualization and calculation of linear algebra concepts.
- Compute limits and derivatives of algebraic, trigonometric, inverse trigonometric, exponential, logarithmic, and piece-wise defined functions;
- Compute definite and indefinite integrals of algebraic, trigonometric, inverse trigonometric, exponential, logarithmic, and piece-wise defined functions;
- Determine the continuity and differentiability of a function at a point and on a set;
- Use the derivative of a function to determine the properties of the graph of the function and use the graph of a function to estimate its derivative;
- Solve problems in a range of mathematical applications using the derivative or the integral;
- Apply the Fundamental Theorem of Calculus; and
- Use appropriate modern technology to explore calculus concepts.
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