MATH 1314

- Graph linear functions
- Graph functions involving a sequence of transformations
- Graph piecewise-defined functions
- Graph polynomial functions
- Graph rational functions
- Graph exponential functions
- Solve polynomial inequalities
- Recognize characteristics of graphs of polynomial functions
- Write an equation given a point and slope
- Write equations of lines, given slope and y-intercept
- Solve applied problems
- Identify even or odd functions and recognize their symmetries
- Use the Linear Factorization Theorem to find polynomials with given zeros
- Use the quadratic formula to solve equations
- Solve polynomial equations
- Find the domain of rational functions
- Identify vertical asymptotes
- Identify horizontal asymptotes
- Identify slant asymptotes
- Form composite functions
- Combine functions using the algebra of functions, specifying domains
- Find the inverse of a function
- Use compound interest formulas
- Model exponential growth and decay
- Change from exponential to logarithmic form
- Change from logarithmic to exponential form
- Expand logarithmic expressions
- Condense logarithmic expressions
- Use the change-of-base property
- Use the definition of a logarithm to solve logarithmic equations
- Solve systems of linear equations in three variables
- Multiply matrices
- Find the multiplicative inverse of a square matrix
- Solve applied problems involving exponential and logarithmic equations

MATH 2412

- Use factoring to find zeros of polynomial functions and identify their multiplicities
- Find the domain of rational functions
- Identify vertical asymptotes
- Identify horizontal asymptotes
- Solve linear inequalities
- Use the Linear Factorization Theorem to find polynomials with given zeros
- Form composite functions
- Find the inverse of a function
- Use like bases to solve exponential equations
- Solve applied problems involving exponential and logarithmic equations
- Use the definition of a logarithm to solve logarithmic equations
- Use compound interest formulas
- Understand the graph of $y = \sin x$, and graph variations of $y = \sin x$
- Graph variations trigonometric functions
- Find all solutions of a trigonometric equation
- Use the double-angle formulas
- Solve trigonometric equations quadratic in form
- Use point plotting to graph polar equations

- Represent vectors in the rectangular coordinate system
- Write a vector in terms of its magnitude and direction
- Solve applied problems involving vectors
- Graph parabolas with vertices not at the origin
- Write equations of ellipses in standard form
- Graph ellipses not centered at the origin
- Locate a hyperbola's vertices and foci
- Find the common difference or write terms of an arithmetic sequence
- Use summation notation
- Write terms of a geometric sequence
- Expand a binomial raised to a power
- Evaluate limits using properties of limits
- Evaluate limits from a graph
- Evaluate one-sided limits
- Use the definition of derivative to find f' or tangent lines
- Solve applications