

Calculus A

Successful students will be able to:

- Find numerical, algebraic, and graphical limits
- Use the limit theorems to validate a limit
- Identify continuous and discontinuous functions
- Find limits involving infinity
- Use the intermediate value theorem
- Identify the concept of instantaneous rate of change
- Find rates of change by equation, graph, or table
- Identify and create the graph of the derivative of a function
- Find derivatives of power, trigonometric, inverse trigonometric, implicit, logarithmic, exponential, and composite functions
- Use the power rule, product rule, and quotient rule to find derivatives
- Identify the relationship and find the equations for displacement, velocity, and acceleration
- Use technology to find graphical and numerical limits

Calculus B

Successful students will be able to:

- Solve related rates application problems
- Calculate a definite integral using numerical techniques including counting squares, trapezoids, rectangles, and parabolas
- Find linear approximations and differentials
- Use the Mean Value Theorem and Rolle's Theorem to develop the Fundamental Theorem of Calculus
- Solve integrals using the Fundamental Theorem of Calculus
- Use l'Hospital's Rule to find the limits of expressions in indeterminate form
- Solve differential equations
- Find and use critical points and points of inflection to determine equations and graphs of functions
- Find the maxima and minima in plane figures and solids