

# MATH& 148 : Business Calculus

**Credits** 5

**Quarter Offered** Winter

Limits, rates of change, graphing, differentiating, optimizing, polynomials, integration, logarithmic and exponential functions, implicit differentiation, business applications. This class may include students from multiple sections. (Quantitative Skills, Natural Sciences, Elective)

**Prerequisites**

2.0 or higher in [MATH& 141](#) or [MATH 111](#)

**Course Outcomes**

- Evaluate the limit of a function, including the limit as  $x$  approaches infinity and one-sided limits, using graphical, numerical and algebraic methods.
- Compute and interpret the average rate of change and the instantaneous rate of change of a function.
- Compute the derivative of a function using the limit definition and derivative rules: power, constant multiple, sum and difference, product, quotient, chain, exponential, and logarithmic.
- Use differentiation to solve business application problems.
- Find extrema and solve optimization problems.
- Find inflection points (points of diminishing returns).
- Compute antiderivatives.
- Use the Fundamental Theorem of Calculus to compute definite integrals.
- Use integration to solve business application problems.