



Math B101: Calculus I

Calculus is our way of describing change. It teaches us how to measure the change of a variable over time (such as location, velocity, temperature, or monetary value). It allows us to predict changes in a system (as in climatology, economics, or probability). It even helps us choose optimal solutions to problems (as in machine learning or numerical analysis).

In this course we will cover the fundamental concepts of the *derivative* of a function, interpreting it both geometrically as the slope of a tangent line and quantitatively as the instantaneous rate of change. While learning *what* derivatives are and *how* to calculate them, we will discuss their applications to everyday problems. The course concludes by setting the stage for Calculus II; we will discuss the *antiderivative* and the *integral* of a function.

The prerequisite for this course is an SAT or ACT score that indicates proficiency in high school algebra, geometry, trigonometry, and precalculus. The minimum scores associated with this level of proficiency are an SAT of 630 or an ACT of 26. A score of 18 or higher on the Calculus Readiness Placement is also recommended.