



# COLLEGE ALGEBRA

## A BRIDGE TO ABSTRACTION: A COLLEGE ALGEBRA COURSE CONTAINING ALGEBRA II

In this course, students deepen their critical thinking skills and develop their ability to persist through challenges as they explore function families: Linear, Absolute Value, Quadratic, Polynomial, Radical, Rational, Exponential, and Logarithmic. Students analyze data algebraically and with technology while developing their knowledge of properties of functions, matrices and systems of equations, and complex numbers.

Students will experience high-quality curriculum designed by the faculty at The University of Texas at Austin. The pedagogy of the course, Inquiry-Based Learning, encourages students to take an active role in the construction of their learning. This learning will be accomplished by abstraction, generalization, problem-solving, and modeling.

# BIG IDEAS



## FUNCTION FAMILIES

Linear and Absolute Value Functions; Quadratic and Cubic Functions; Polynomial, Rational, and Radical Functions; Exponential and Logarithmic Functions

## FUNCTION COMPOSITIONS, TRANSFORMATIONS, AND INVERSES

## MATRICES AND SYSTEMS OF EQUATIONS AND INEQUALITIES

## THE COMPLEX NUMBER SYSTEM

## MODELING, DATA ANALYSIS, AND FUNCTION REGRESSION

## SEQUENCES, SERIES, AND THE BINOMIAL THEOREM

## TRANSFERABILITY

3 College Credits

UT Course Code: M 301

TCCN: MATH 1314

## PRE-REQUISITES

Algebra I

Geometry (recommended)

## TECHNOLOGY

Computer, Laptop, Chromebook, or Tablet Access

## PEDAGOGY

Inquiry-Based Learning