

CENTRAL BUCKS SCHOOL DISTRICT
Course of Study
Recommendation for Adoption

Course: Calculus 3

Date: August 6, 2026

Student Level: High School

Grade Level: 11, 12

Characterization of Course of Study:

Calculus 3 is designed for students who have successfully completed coursework in single-variable calculus and are prepared for advanced study of functions of several variables and three-dimensional space. The course includes vectors and the geometry of space, vector-valued functions, partial derivatives, multiple integrals, vector calculus, and second-order differential equations.

This course aligns with the third semester of a typical college calculus sequence and provides students with continued access to rigorous mathematics while enrolled in high school. Instruction emphasizes mathematical reasoning, problem solving, visualization, multiple representations, and appropriate use of technology to support students' readiness for postsecondary mathematics coursework.

Reasons for Proposed Adoption:

Adoption of the Calculus 3 Course of Study is recommended to provide a clear, consistent, and rigorous curriculum for students pursuing advanced mathematics beyond Calculus 2. The course reflects the district's commitment to meeting the needs of students prepared for advanced college-level mathematical study.

The course develops students' ability to analyze functions across representations, justify mathematical reasoning, use technology to model complex relationships, and apply calculus concepts to problems involving motion, geometry, optimization, density, mass, circulation, flux, and differential equations. These expectations support the district's goal of developing students who reason quantitatively, communicate mathematically, and apply mathematical models to complex situations.

Principal Approval Date: _____

Curriculum Committee Approval Date: _____

School Board Approval Date: _____