**Danville Area School District**
**Course Overview and Scope and Sequence**

**Course Title: AP Precalculus**
**Content Area: Math**
**Grade Level: 9-12**
**Date Developed:** 8/11/2023

COURSE OVERVIEW: AP Precalculus centers on functions modeling dynamic phenomena. This research-based exploration of functions is designed to better prepare students for college-level calculus and provide grounding for other mathematics and science courses. In this course, students study a broad spectrum of function types that are foundational for careers in mathematics, physics, biology, health science, business, social science, and data science. Furthermore, as AP Precalculus may be the last mathematics course of a student's secondary education, the course is structured to provide a coherent capstone experience rather than exclusively focusing on preparation for future courses.

ANCHOR STANDARDS:

1. Algebraically manipulate functions, equations, and expressions.
2. Translate mathematical information between representations.
3. Communicate with precise language, and provide rationales for conclusions.

KEY COURSE TEXT AND MATERIALS: Precalculus

KEY ASSESSMENTS:
Diagnostic: Keystone Algebra Exam, PVAAS
Formative: Quizzes, Unit Exams, Personal Progress Checks
Summative: AP Precalculus Exam

| SCOPE AND SEQUENCE | | | | |
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| Unit | PRIORITY STANDARDS | ASSESSMENT | MATERIALS | TIMEFRAME |
| **Polynomial and Rational Functions** | 1<br>2<br>3 | Quizzes; Unit Exam; Progress Checks | Text; College Board; Supplemental Materials | 6-8 Weeks |
| Exponential and Logarithmic Functions | 1<br>2<br>3 | Quizzes; Unit Exam; Progress Checks | Text; College Board; Supplemental Materials | 6-9 Weeks |
| Trigonometric and Polar Functions | 1<br>2<br>3 | Quizzes; Unit Exam; Progress Checks | Text; College Board; Supplemental Materials | 7-10 Weeks |
| Functions Involving Parameters, Vectors, and Matrices | 1<br>2<br>3 | Quizzes; Unit Exam; Progress Checks | Text; College Board; Supplemental Materials | 7 Weeks |