

Curriculum

# MATH

AP Pre-Calculus

# Meet Your Teacher

## Hi! I am Adam Gilbert

- Brown University BSc in Geophysics & Seismology
- 7+ years of teaching experience
- Fully licensed and background checked



### About MyEdSpace:

20K+

students have taken our courses



500K+

learning hours completed



4.8/5

Trustpilot score from 2100+ reviews










4M+

followers across social platforms



# What's Included?

-  Personalized: choose the right level of content and teaching for you
-  Award winning learning platform
-  Live lessons each month with a world class teacher
-  Recordings so you never miss a live lesson (great when studying for exams too!)
-  Exam style homework every week
-  Step-by-step video solutions with expert tips and tricks
-  Professionally designed study materials and workbooks

# Course Structure

## Module 1

1. Changes in Tandem
2. Rates of Change
3. Rates of Change in Linear and Quadratic Functions
4. Polynomial Functions and Rates of Change
5. Polynomial Functions and Complex Zeros
6. Even and Odd Polynomials

## Module 2

1. Polynomial Functions and End Behavior
2. Rational Functions and End Behavior Part 1
3. Rational Functions and End Behavior Part 2
4. Rational Functions and Zeros
5. Rational Functions and Vertical Asymptotes
6. Rational Functions and Holes
7. Equivalent Representations and Binomial Theorem
8. Polynomial Long Division and Slant Asymptotes

# Course Structure

## Module 3

1. Transformations of Functions
2. Function Model Selection and Assumption Articulation
3. Function Model Construction and Application
4. AP Exam Problems
5. Change in Arithmetic and Geometric Sequences
6. Change in Linear and Exponential Functions
7. Exponential Functions
8. Exponential Function Manipulation

## Module 4

1. Exponential Function Context and Data Modeling
2. Exponential Function Context and Data Modeling
3. Competing Function Model Validation
4. Composition of Functions
5. Composition of Functions
6. Inverse Functions

# Course Structure

## Module 5

1. Logarithmic Expressions
2. Inverses of Exponential Functions
3. Logarithmic Functions
4. Logarithmic Function Manipulation
5. Exponential and Logarithmic Equations and Inequalities
6. Exponential and Logarithmic Equations and Inequalities

## Module 6

1. Logarithmic Function Context and Data Modeling
2. Semi-log Plots
3. AP Exam Problems
4. Periodic Phenomena
5. Radians
6. Sine, Cosine, Tangent
7. Sine and Cosine Function Values
8. Sine and Cosine Function Values

# Course Structure

## Module 7

1. Sine and Cosine Function Graphs
2. Sinusoidal Functions
3. Sinusoidal Function Transformations
4. Sinusoidal Function Transformations
5. Sinusoidal Function Context and Data Modeling
6. The Tangent Function
7. Inverse Trigonometric Functions
8. Trigonometric Equations and Inequalities

## Module 8

1. The Secant, Cosecant, and Cotangent Functions
2. Equivalent Representations of Trigonometric Functions
3. Equivalent Representations of Trigonometric Functions
4. Trigonometry and Polar Coordinates
5. Polar Function Graphs
6. Polar Function Graphs
7. Rates of Change in Polar Functions
8. AP Exam Problems

# Course Structure

## Module 9

1. AP Exam Prep - Rates of Change
2. AP Exam Prep - Polynomial Functions
3. AP Exam Prep - Rational Functions
4. AP Exam Prep - Function Model Application
5. AP Exam Prep - Exponential Functions
6. AP Exam Prep - Logarithmic Functions
7. AP Exam Prep - Trigonometric Functions
8. AP Exam Prep - Polar Functions

## Module 10

1. AP Exam Prep - Mixed Review
2. AP Exam Prep - Mixed Review
3. Introduction to Parametric Functions
4. Parametric Functions and Rates of Change
5. Introduction to Vectors
6. Vector-Valued Functions
7. Introduction to Matrices
8. Inverse and Determinant of a Matrix