Curriculum

MATH

AP Calculus AB

myedspace.com

Meet Your Teacher

Hi! I am Eddie Kang

- Senior Math Teacher at MyEdSpace
- Pure Mathematics Major from UCLA
- 9 years teaching experience in high schools as well as colleges

@EddieDoesMath

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

*Curriculum subject to change.

Course Structure

Module 1

1. Pre-Calculus Review
2. Defining Limits and Estimating Limits
3. Limit Values from Tables and Algebraic Properties
4. Determining Limits Using Algebraic Manipulation
5. Procedures for Determining Limits and the Squeeze Theorem
6. Multiple Representations of Limits and Types of Discontinuities

Module 2

1. Defining Continuity
2. Removing Discontinuities, Limits and Vertical Asymptotes
3. Limits and Horizontal Asymptotes, Intermediate Value Theorem (IVT)
4. AP Exam Problems
5. Defining Rate of Change and Defining Derivatives
6. Estimating Derivatives and Differentiability and Continuity
7. Applying the Power Rule and Derivative Rules
8. Derivatives and The Product Rule

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Course Structure

Module 3

1. The Quotient Rule and Derivatives
2. AP Exam Problems
3. The Chain Rule
4. Implicit Differentiation
5. Differentiating Inverse Functions
6. Selecting Procedures for Calculating Derivatives
7. AP Exam Problems
8. Interpreting the Derivative in Context and Straight-Line Motion

Module 4

1. Rates of Change in Applied Contexts Other Than Motion
2. Introduction to Related Rates Solving Related Rates Problems
3. Approximating Values of a Function Using Linearity
4. Using L'Hopital's Rule for Determining Limits
5. AP Exam Problems
6. Using the Mean Value Theorem (MVT)

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Course Structure

Module 5

1. Extreme Value Theorem (EVT)
2. Determining Intervals and The First Derivative Test
3. Using the Candidates Test to Determine Absolute (Global) Extrema
4. Determining Concavity and the Second Derivative Test
5. Graphing Functions and Their Derivatives
6. Optimization Problems

Module 6

1. Exploring Behaviors of Implicit Relations
2. AP Exam Problems
3. Exploring Change/Approximating Areas
4. Riemann Sums, Summation Notation, and Definite Integral Notation
5. The Fundamental Theorem and Accumulation Functions
6. The Fundamental Theorem and Definite Integrals
7. Finding Antiderivatives and Indefinite Integrals
8. Integrating Functions Using Long Division and Completing the Square

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Course Structure

Module 7

1. Selecting Techniques for Antidifferentiation
2. AP Exam Problems
3. Differential Equations Situations and Solutions
4. Sketching Slope Fields/Reasoning Using Slope Fields
5. General Solutions Using Separation of Variables
6. Initial Conditions and Separation of Variables/Exponential Models
7. AP Exam Problems
8. Average Value of a Function on an Interval

Module 8

1. Position, Velocity, and Acceleration Using Integrals
2. Using Accumulation Functions and Definite Integrals
3. Area Between Curves (with respect to x and y)
4. Area Between Curves - More than Two Intersections
5. Cross Sections of Shapes
6. Disc Method: Revolving Around Axes
7. Washer Method: Revolving Around Axes
8. AP Exam Problems

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Course Structure

Module 9

1. AP Exam Prep - Limits and Continuity
2. AP Exam Prep - Differentiation: Definition
3. AP Exam Prep - Differentiation: Functions
4. AP Exam Prep - Contextual Applications of Differentiation
5. AP Exam Prep - Analytical Applications of Differentiation
6. AP Exam Prep - Integration and Accumulation of Change
7. AP Exam Prep - Differential Equations
8. AP Exam Prep - Applications of Integration

Module 10

1. AP Exam Prep - Mixed Review
2. AP Exam Prep - Mixed Review
3. Integrating Using Integration by Parts
4. Using Linear Partial Fractions
5. Evaluating Improper Integrals
6. Approximating Solutions Using Euler's Method
7. Logistic Models with Differential Equations
8. The Arc Length of a Smooth, Planar Curve and Distance Traveled

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