



WELCOME TO AP CALCULUS AB!

AUDREY CALLAHAN

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About Me:

I am so excited to start this year with you at IA! This is my 30th year in education. I have taught all levels of high school mathematics and German. I have two daughters, Grace (23) and Megan (22).

Ms. Callahan

Education:

B.S. in Mathematics Education from the University of Georgia

M.Ed. in Mathematics Education from Georgia State University

Ed.S. in Advanced Educational Studies with a concentration in Mathematics from Augusta University

Certifications: Mathematics, German, Gifted and National Board Certification



Contact Information:

Email: callahana@fultoncountyschools.org

UNIT 1 Limits and Continuity		UNIT 2 Differentiation: Definition and Basic Derivative Rules		UNIT 3 Differentiation: Composite, Implicit, and Inverse Functions		UNIT 4 Contextual Applications of Differentiation		UNIT 5 Analytical Applications of Differentiation		UNIT 6 Integration and Accumulation of Change		UNIT 7 Differential Equations		UNIT 8 Applications of Integration			
AP EXAM WEIGHTING 10–12% AB 4–7% BC		AP EXAM WEIGHTING 10–12% AB 4–7% BC		AP EXAM WEIGHTING 9–13% AB 4–7% BC		AP EXAM WEIGHTING 10–15% AB 6–9% BC		AP EXAM WEIGHTING 15–18% AB 8–11% BC		AP EXAM WEIGHTING 17–20% AB 17–20% BC		AP EXAM WEIGHTING 6–12% AB 6–9% BC		AP EXAM WEIGHTING 10–15% AB 6–9% BC			
CLASS PERIODS ~22–23 AB ~13–14 BC		CLASS PERIODS ~13–14 AB ~9–10 BC		CLASS PERIODS ~10–11 AB ~8–9 BC		CLASS PERIODS ~10–11 AB ~6–7 BC		CLASS PERIODS ~15–16 AB ~10–11 BC		CLASS PERIODS ~18–20 AB ~15–16 BC		CLASS PERIODS ~8–9 AB ~9–10 BC		CLASS PERIODS ~19–20 AB ~13–14 BC			
CHA 2	1.1	Introducing Calculus: Can Change Occur at an Instant?	CHA 2	2.1	Defining Average and Instantaneous Rates of Change at a Point	FUN 1	3.1	The Chain Rule	CHA 3	5.1	Using the Mean Value Theorem	CHA 4	6.1	Exploring Accumulations of Change	CHA 1	8.1	Finding the Average Value of a Function on an Interval
LIM 2	1.2	Defining Limits and Using Limit Notation	CHA 1	2.2	Defining the Derivative of a Function and Using Derivative Notation	FUN 1	3.2	Implicit Differentiation	CHA 3	5.2	Extreme Value Theorem, Global Versus Local Extrema, and Critical Points	LIM 1	6.2	Approximating Areas with Riemann Sums	FUN 3	8.2	Connecting Position, Velocity, and Acceleration of Functions Using Integrals
LIM 2	1.3	Estimating Limit Values from Graphs	CHA 4	2.3	Estimating Derivatives of a Function at a Point	FUN 3	3.3	Differentiating Inverse Functions	CHA 2	5.3	Determining Intervals on Which a Function Is Increasing or Decreasing	LIM 2	6.3	Riemann Sums, Summation Notation, and Definite Integral Notation	FUN 2	8.3	Using Accumulation Functions and Definite Integrals in Applied Contexts
LIM 2	1.4	Estimating Limit Values from Tables	CHA 1	2.4	Connecting Differentiability and Continuity: Determining When Derivatives Do and Do Not Exist	FUN 1	3.4	Differentiating Inverse Trigonometric Functions	CHA 2	5.4	Using the First Derivative Test to Determine Relative (Local) Extrema	FUN 1	6.4	The Fundamental Theorem of Calculus and Accumulation Functions	FUN 4	8.4	Finding the Area Between Curves Expressed as Functions of x
LIM 1	1.5	Determining Limits Using Algebraic Properties of Limits	FUN 3	2.5	Applying the Power Rule	FUN 1	3.5	Selecting Procedures for Calculating Derivatives	CHA 3	5.5	Using the Candidates Test to Determine Absolute (Global) Extrema	FUN 2	6.5	Interpreting the Behavior of Accumulation Functions Involving Area	CHA 4	8.5	Finding the Area Between Curves Expressed as Functions of y
LIM 1	1.6	Determining Limits Using Algebraic Manipulation	FUN 1	2.6	Derivative Rules: Constant, Sum, Difference, and Constant Multiple	FUN 1	3.6	Calculating Higher-Order Derivatives	CHA 1	5.6	Determining Concavity of Functions over Their Domains	FUN 1	6.6	Applying Properties of Definite Integrals	CHA 1	8.6	Finding the Area Between Curves That Intersect at More Than Two Points
LIM 1	1.7	Selecting Procedures for Determining Limits	FUN 1	2.7	Derivatives of $\cos x$, $\sin x$, e^x , and $\ln x$	FUN 1			CHA 3	5.7	Using the Second Derivative Test to Determine Extrema	FUN 3	6.7	The Fundamental Theorem of Calculus and Definite Integrals	CHA 2	8.7	Volumes with Cross Sections: Squares and Rectangles
LIM 3	1.8	Determining Limits Using the Squeeze Theorem	FUN 1	2.8	The Product Rule	FUN 1			FUN 2	5.8	Sketching Graphs of Functions and Their Derivatives	FUN 4	6.8	Finding Antiderivatives and Indefinite Integrals: Basic Rules and Notation	CHA 3	8.8	Volumes with Cross Sections: Triangles and Semicircles
LIM 3	1.10	Exploring Types of Discontinuities	FUN 1	2.9	The Quotient Rule	FUN 1			FUN 2	5.9	Connecting a Function, Its First Derivative, and Its Second Derivative	FUN 1	6.9	Integrating Using Substitution	CHA 3	8.9	Volume with Disc Method: Revolving Around the x - or y -Axis
LIM 3	1.11	Defining Continuity at a Point	FUN 1	2.10	Finding the Derivatives of Tangent, Cotangent, Secant, and/or Cosecant Functions	FUN 1			FUN 2	5.10	Introduction to Optimization Problems	FUN 1	6.10	Integrating Functions Using Long Division and Completing the Square	CHA 2	8.10	Volume with Disc Method: Revolving Around Other Axes
LIM 1	1.12	Confirming Continuity over an Interval	FUN 1			FUN 1			FUN 3	5.11	Solving Optimization Problems	FUN 1	6.11	Integrating Using Integration by Parts BC ONLY	CHA 4	8.11	Volume with Washer Method: Revolving Around the x - or y -Axis
LIM 1	1.13	Removing Discontinuities				FUN 1			FUN 1	5.12	Exploring Behaviors of Implicit Relations	LIM 1	6.12	Using Linear Partial Fractions BC ONLY	CHA 2	8.12	Volume with Washer Method: Revolving Around Other Axes
LIM 3	1.14	Connecting Infinite Limits and Vertical Asymptotes							FUN 3			FUN 1	6.13	Evaluating Improper Integrals BC ONLY	CHA 3	8.13	The Arc Length of a Smooth, Planar Curve and Distance Traveled BC ONLY
LIM 2	1.15	Connecting Limits at Infinity and Horizontal Asymptotes										FUN 1	6.14	Selecting Techniques for Antidifferentiation			
FUN 3	1.16	Working with the Intermediate Value Theorem (IVT)															

The AP Calculus AB exam is on Monday, May 10th, 2027.

COURSE GRADES



Major Grades: 55%



Minor Grades: 35%



Practice Grades: 10%



Practice assignments are primarily given in AP Classroom and online through Classlink (Bedford, Freeman and Worth - BFW). The AP Classroom assignments are graded upon completion and the BFW assignments are graded upon accuracy, but the students have unlimited chances to get the correct answers.

EXPECTATIONS



WORK HARD!
TRY HARD!



COME TO CLASS
PREPARED.



HAVE A GOOD
ATTITUDE.

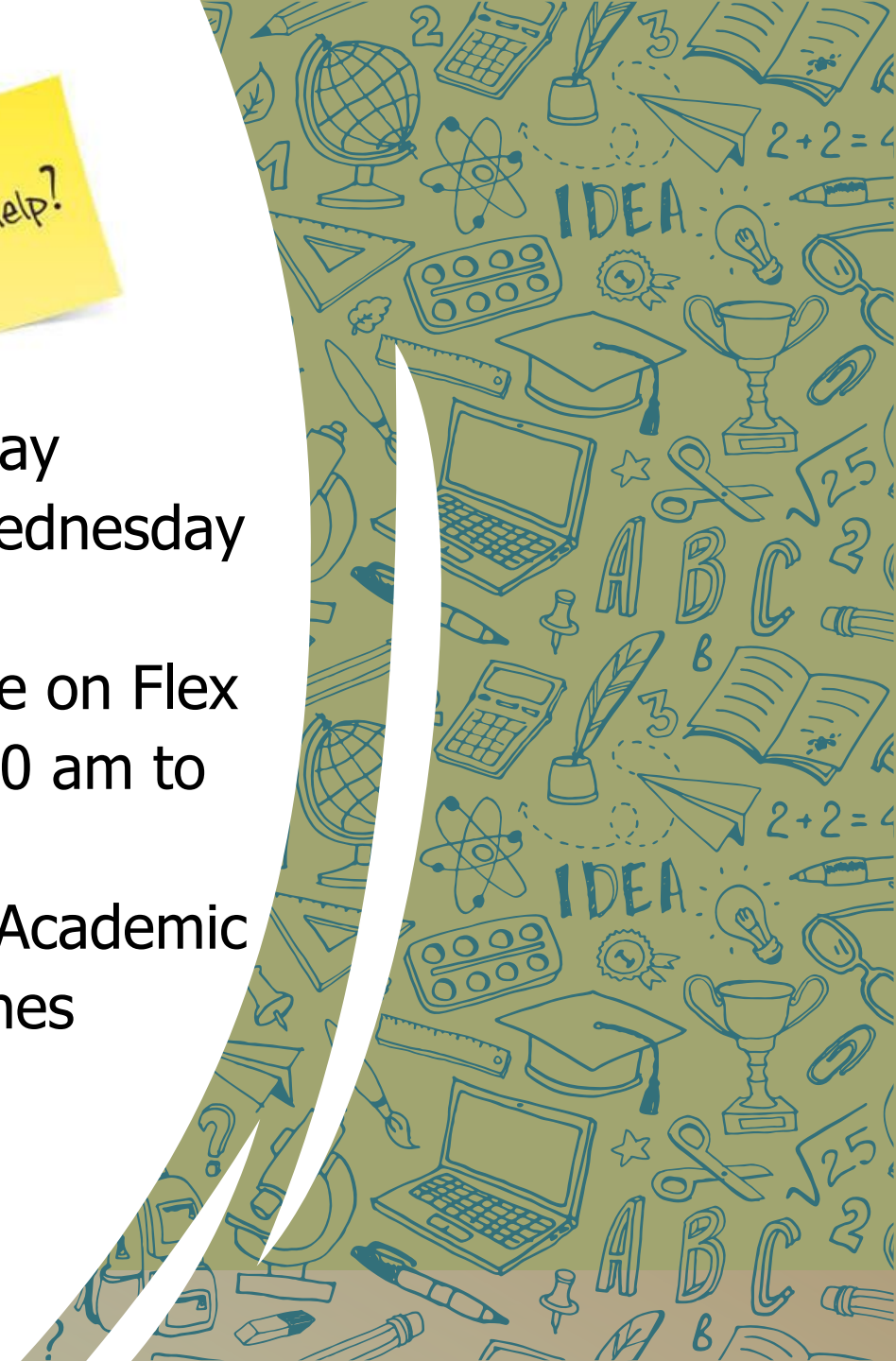


BE READY TO BE
CHALLENGED!

SUPPORT



- Tutoring
 - Most weeks I am available Monday and Tuesday mornings from 8:15 am to 8:50 am and on Wednesday afternoons from 4:20 to 5 pm in Room 331.
 - Students can also come in for tutoring with me on Flex Fridays from 8:55 am to 9:25 am and / or 9:30 am to 10:00 am in Room 331.
 - Additional tutoring is available in the Phoenix Academic Center in the 380s hubs during 4th & 5th Lunches
- Other resources
 - Textbook
 - AP Classroom (Daily Videos by Topic)





**THANK YOU FOR SUPPORTING
YOUR CHILD!**

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