AP Calculus Course Outline

Week 1

- Video: What is Calculus? – This video is a description of Calculus. What it is and what it is not.
- Discussion Post: What is Calculus? The prompt will be centered around whether a situation is Calculus or not?
- Video: What is a Limit? – This video will detail what is a limit and how to evaluate it graphically and numerically (using a table).
- Discussion Post: What is a Limit? – The prompt will be for the students to describe the process in which they would use to evaluate a limit graphically and numerically.
- Video Meeting – It is to your benefit to watch the videos and participate in the discussion prior to the meeting. You must post a discussion and respond to two (2) other students' post. This will be our conference with the entire class to discuss and for me to instruct.
- Video Quiz – This quiz will cover both videos.
- Video Meeting – This will be our conference with the entire class to discuss and for me to instruct.
- Assignment: Evaluating a limit graphically – This assignment will cover evaluating a limit using a graph.
- Assignment: Evaluating a limit numerically – This assignment will cover evaluating a limit using a table.
- Video Meeting – This will be our conference with the entire class to discuss and for me to instruct.
- Quiz – This will cover both videos and assignments. Students will be required to evaluate limits either graphically or numerically.
- Summary – Summarize the learning for Week 1.

Week 2

- Video: Evaluating Limits Algebraically – This video will detail how to evaluate a limit algebraically.
- Discussion Post: Basic Limits – The prompt for the discussion will be on How to evaluate a Limit Algebraically.
- Video Meeting – It is to your benefit to watch the videos and participate in the discussion prior to the meeting. You must post a discussion and respond to two (2) other students' post. This will be our conference with the entire class to discuss and for me to instruct.
- Assignment: Basic Evaluation Algebraically – This assignment will cover the basic evaluation of limits algebraically.
- Video: Evaluating Limits Algebraically – This video will detail the Dividing-Out Method.
- Discussion Post: The prompt for this post will be "How would you know if you can use the Dividing-Out Method for evaluating Limits?
- Video Meeting – It is to your benefit to watch the videos and participate in the discussion prior to the meeting. You must post a discussion and respond to two (2) other students' post. This will be our conference with the entire class to discuss and for me to instruct.
- Assignment: Dividing-Out Method – This assignment will cover the Dividing-Out Method.
- Quiz: Evaluating Basic Limits and Using the Dividing-Out Method
- Summary – Summarize the learning for Week 2.

Week 3

- Video: Evaluating Limits Algebraically – This video will detail the Rationalizing Method.
- Discussion Post: This prompt for this post is "What is the key to using the Rationalizing Method?"

- Video Meeting – It is to your benefit to watch the videos and participate in the discussion prior to the meeting. You must post a discussion and respond to two (2) other students' post. This will be our conference with the entire class to discuss and for me to instruct.
- Assignment: What is the next step? – This assignment will be one in which the student must input next step in the process to evaluate Limits using the Rationalizing Method
- Assignment: Evaluating Limits using the Rationalizing Method – This assignment will cover evaluating limits using the rationalizing method.
- Assignment: Which Method will you use? – This assignment will have the student decide on which method they would use to evaluate the Limits, (Basic, Dividing-Out or Rationalizing).
- Summary – Summarize the learning for Week 3.

Week 4

- Video: One-Sided Limits – This video will detail how to find limits from either the left or right side of a point.
- Discussion Post – The prompt will be "How do you determine a limit from the left or right side of a point?"
- Video Quiz: One-Sided Limits – This will cover how to evaluate one-sided limits.
- Assignment: Interactive Desmos Assignment on One-Sided Limits – Students will be required to evaluate limits from one side.
- Video Meeting – This the class meeting where clarification and instruction will take place.
- Video: Limits at Infinity – This video will cover how to evaluate limits at infinity.
- Discussion Post – The prompt will be "What is the difference between infinity and a number?"
- Assignment: Horizontal Asymptotes – This assignment will cover Limits at Infinity.
- Summary of Learning – This is where the students would summarize their learning for the week.
- Quiz – This quiz will cover One-Sided Limits and Limits at Infinity.

Week 5

- Video: Infinite Limits – This video will discuss the situations where you would have infinity as the answer when evaluating limits.
- Discussion Post: Infinite Limits – The prompt will be "What does it mean to have infinity as your answer when evaluating limits?"
- Assignment: Infinite Limits – The assignment will cover the situations of when you have an infinite limit.
- Video Meeting – This the class meeting where clarification and instruction will take place.
- Video: Continuity and Discontinuity at a point – This will cover the conditions of continuity.
- Discussion Post: Continuity or Discontinuity – The prompt will be "What are the conditions for a function to be continuous at a point?"
- Video Meeting – This the class meeting where clarification and instruction will take place.
- Assignment: Continuity – The students will determine whether a function is continuous or discontinuous at a particular point.
- Summary of Learning – This is where the students would summarize their learning for the week.
- Exam – This summative assessment will cover everything in the course.