

AP CALCULUS COURSE SYLLABUS

COURSE:	AP Calculus
INSTRUCTOR:	Ms. Jessie Fowls
TEXTBOOK:	Finney, Ross L., Franklin D. Demana, Bert K. Waits, and Daniel Kennedy. <i>Calculus: Graphical, Numerical, Algebraic: Fourth Edition (AP Edition)</i> . Boston: Pearson Prentice Hall. 2012.
REQUIRED SUPPLIES:	Lined Paper, Graph Paper, Pencils, Erasers, Protractor, Ruler, Colored Pencils, TI-83+ or 84+ Calculator
PREREQUISITE:	A grade of B or better in Precal/Trig and teacher recommendation.

COURSE PURPOSE

This is an advanced level course designed for students who have completed all pre-calculus material. The function concept is central to calculus. The course studies this concept graphically, numerically, and symbolically. This approach to functions builds a conceptual understanding of limits and continuity, differentiation, integration, and differential equations.

COURSE DESCRIPTION

A. Course Outcomes

1. Students prove and use theorems evaluating the limits of sums, products, quotients, and composition of functions.
2. Students demonstrate an understanding of the derivative of a function as the slope of the tangent line to the graph of a function.
3. Students demonstrate an understanding of the interpretation of the derivative as an instantaneous rate of change. Students can use derivatives to solve a variety of problems from physics, chemistry, economics, and so forth that involve the rate of change of a function.
4. Students use differentiation to sketch, by hand, graphs of functions. They can identify maxima, minima, inflection points, and intervals in which the function is increasing and decreasing.
5. Students use differentiation to solve related rate problems in a variety of pure and applied contexts.
6. Students know the definition of the definite integral by using Riemann sums. They use this definition to approximate integrals.
7. Students apply the definition of the integral to model problems in physics, economics, and so forth, obtaining results in terms of integrals.
8. Students know the techniques of solution of selected elementary differential equations and their applications to a wide variety of situations, including growth and decay problems.

GRADE DESCRIPTION

Semester grades are cumulative and will be calculated as follows:

Tests & Projects	60%
Daily Assignments, Quizzes	25%
Semester Exam (1 st Semester only)	15%

ADDITIONAL INFORMATION

All homework and notes must be done in **pencil** on loose-leaf paper or in a spiral notebook (*turned in without spiral confetti*). The scoring for daily assignments will be on a 10 point scale and will be graded in class, checked for completion, or graded by me. The grades given for the majority of the assignments will be as follows:

<u>Incorrect</u>	<u>Points Awarded (out of 10)</u>
0-1	10
2-3	9
4-6	8
7-9	7
10+	Redo/correct for credit

Late work will be accepted up to 2 class periods after the original due date. The student will have the opportunity to earn 80% after 1 late reminder. After the second reminder, the student is still responsible for turning in the completed assignment but will earn a 0%. Three late assignments per quarter will result in a detention.

AP Exam: All students in AP Calculus are required to take the AP exam in May.

Class Expectations

1. Encourage LEARNING.
2. RESPECT yourself, adults, and your classmates.
3. Be RESPONSIBLE.
4. Be ACCOUNTABLE.

The Obvious requirements for success

1. Cheating is absolutely not acceptable and will guarantee a zero on the assignment or test along with a trip to the office for administrative consequences.
2. Be on time and be prepared.
3. Complete assignments neatly and on time.
4. Don't wait to ask for help - I'm here to help you succeed.

Consequences for negative behavior include

1. Behavioral reminder, loss of privilege, and/or work detail.
2. Sent out of class & student/teacher conference.
3. Parent notification.
4. Sent to the office.

Attendance & Tardiness

Absences will affect your performance in this class **more than anything else**. It is your responsibility to make up any work you missed. You will have up to the number of class days you were gone to make up your work for full credit for excused absences. If you participate in sports or other school related events that cause you to be absent from class, your homework must be turned in **before** you leave school.

Tardiness: I expect all students to be in class and seated when the bell rings. If you need to visit your locker after class has started, you will be marked tardy. Excessive tardiness will result in a student-teacher conference and parent notification.

School Policies

Students are subject to all academic policies of the school as printed in the Student Handbook. Furthermore, it is each student's responsibility to read and follow all academic policies of the school.

- ★ Students are expected to come prepared to class with all their necessary, required supplies. If a student does not come prepared, this will be noted and may affect his/her grade.
- ★ Cell phone usage in my class is not allowed, unless I give permission. All devices, including ipods and earbuds, are not to be seen, heard, or 'felt' during class. If I spot a device in use, it will be mine for the remainder of the class and potentially the day. This is especially important to note when tempted to use your cell phone's calculator. That is not allowed.
- ★ All backpacks are to be placed completely under your seat/desk, up against the wall, or somewhere else, entirely out of the aisles.
- ★ Feel free to contact me via email throughout the year. However, I will only respond to student emails that are written properly and respectfully. Emails should include at the very least, the following components: Salutation, capitalization where necessary, proper use of English, and a closing.



Sign and return to Ms. Fowls

Student Name: _____

AP Calculus

We have read and discussed the class details and expectations. We agree that they will be followed and supported.

Student Signature

Parent/Guardian Signature

Date

Date