

Course Syllabus: AP Calculus BC

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Prerequisite: Teacher placement.

Required Text: *Calculus Early Transcendentals Single Variable (9th edition)*, by Anton, Bivens and Davis

Supplemental Text: *Calculus—Graphical, Numerical, Algebraic*, by Finney et al.

Course Description: Calculus is the branch of mathematics concerned with describing the precise way in which changes in one variable relate to changes in another. Since change occurs constantly all around us, calculus has an enormous, but often unnoticed impact on our daily lives. Part of the purpose of this course is to provide students with some connection between the math they are doing and the things that directly affect how we live. Examples such as how limits are used in medicine, how optimization is used in business, and the calculus of weather prediction will be cited frequently throughout this course. This is a rigorous, college level course. Successful completion and a passing score on the AP exam should garner credit for the second semester of calculus in college. It is the instructor's goal that all students achieve real and complete understanding of the processes and concepts presented. Accordingly, student expectations are high, and students will be required to routinely demonstrate their understanding and proficiency not only by correctly solving the problem at hand, but also by explaining their reasoning either orally or in writing. Students will also be required to memorize certain definitions and theorems and recite them in writing. Specific topics to be covered in depth are listed in the MMHS Math department's approved timeline below.

Fall Semester	Spring Semester
Ch 1 Limits and Continuity (review)	Ch 9 Infinite Series
Ch 2 The Derivative (review)	Ch 10 Parametric and Polar Curves
Ch 3 Topics in Differentiation (review with new→3.6)	Vectors Unit
Ch 4 The Derivative in Graphing and Applications (review)	AP Exam Preparation
Ch 5 Integration (review)	Additional Topics from Ch 7-10 (as time permits)
Ch 6 Applications of the Definite Integral (review with new→6.3, 6.4)	
Ch 7 Principles of Integral Evaluation	
Ch 8 Mathematical Modeling with Differential Equations	

Grading: 90% of the final grade in AP Calculus BC will be based on common benchmark quizzes, tests, and final
 10% of the final grade in AP Calculus BC will be based on assignments, warm-ups, projects, etc.

After the homework discussion, the assignments will be collected and graded based on effort and completion. Most assignments are graded using the following scale:

- 5-Complete and quality work
- 3-Incomplete with at least 60% done
- 0-Nothing submitted or submitted with less than 60% completed

Assignments with no name on them earn 1 point less than they would have earned. Late assignments may be submitted on or before the test day for that chapter for a reduced amount of 2 points each. Periodically, grades will be posted on the board by student ID numbers (to protect right to privacy) and on the internet as well. The standard grading scale will be used:

100-90%	89-80%	79-70%	69-60%	59-0%
A	B	C	D	F

Hall Passes: Students must have their ID card, teacher's permission and a hall pass if out of class during assigned class time. Students being requested by the office will be sent an office call slip. Students are not to be released without a pass.

Suggested Supplies/Format Requirements: pencil, eraser, college ruled lined paper, binder, and a college-ruled spiral or composition notebook. Please keep all of your work (assignments, warm-ups, quizzes, etc) organized in a 3-ring binder and bring it to class every day. You have the option of (1) having a "math only" binder or (2) having a large section of your multiple subject binder dedicated to math work. Bottom line: be sure that you can find your

work whenever you need to. Also, make sure you include your first name, last name, class name, period #, and date on all assignments. Please be sure to have a college-ruled spiral or composition notebook for taking notes on a daily basis. In doing so, your daily lecture notes will remain organized and sequential for your benefit. Your binders and notebooks are subject to inspection and should be quality work, organized and complete. You are required to use a graphing calculator in this course. If you do not have one of your own, you will be able to check one out from the school library. The graphing calculator you choose must be able to: 1) Graph a function 2) Find zeros of functions 3) Numerically calculate the derivative of a function and 4) Numerically calculate the value of a definite integral.

Attendance: If you are absent, it is *your responsibility* to find out what you have missed by checking my website. If possible, contact me as soon as you know you will be missing class and we can keep you up to date with assignments. We can also set times for any make-up tests or quizzes which are typically given on the day of your return. If you only missed the test or quiz day and were present the days prior, expect to take your make-up test or quiz on the day you return. You can contact me via Remind, email, or voicemail. On the day of your return, please see me before school or before class to get caught up (even if that period does not meet that day). Remember that missing just one day can put you behind. Please note that **ONLY WORK MISSED DURING EXCUSED ABSENCES CAN BE MADE UP.**

Promptness: Students are expected to be in their seats at the bell ready to work each day. Tardy students must have a pass, and will be expected to follow Mesa's tardy policy as outlined in the student handbook. Tardy students will also not be permitted to make up the daily warm-up points, regardless of whether or not their tardy was excused.

Citizenship/Classroom Philosophy/Expectations: All students and staff demonstrate RAM PRIDE.....that's Purpose – Responsibility – Integrity – Duty – Excellence. Every student deserves the right to an education free of interference and therefore any actions or behavior causing disruption to that education will not be tolerated. Our class time is very valuable and will not be wasted on behavioral problems. With this in mind, every student while in our classroom must adhere to the general expectations and specific policies below. All Rams will...

- | | | |
|-----------------------|----------------------|--------------------------------|
| -Be Prepared | -Be Responsible | -Be a Leader and a Team Player |
| -Show Respect | -Communicate Clearly | -Stay Organized |
| -Produce Quality Work | | |

Specific Behavior Policies:

1. Be in your seat with materials out and ready to work when the bell rings. See Promptness above.
2. Bring the required materials to class every day.
3. Follow all directions quickly.
4. Do not interrupt when someone else is speaking.
5. No food, drink, candy or gum. Unspillable water bottle with water is the only exception.
6. The bell does not dismiss the class. The teacher will dismiss the students once the room is in order.
7. No cell phones or other electronic devices. **KEEP THEM OFF AND OUT OF SIGHT.**

Communication:

Email will be our most efficient means of communication and I look forward to hearing from you. Please email me any time if you have any questions or concerns. When emailing, please use something similar to below for your subject line. Thank you in advance.

To: *jlrossignol@murrieta.k12.ca.us*
Subject: *period # , AP Calculus BC, student's full name*

-----PRINT JUST THIS LAST PAGE, COMPLETE IT, AND RETURN IT TO MATH CLASS-----

First Homework:

It is the student's **first homework assignment** to return this signed and completed sheet to the **very next class meeting** after reading through it with his/her parents. It is worth 5 points so don't start off on the wrong foot and forget to get it done.

Signatures:

We have read this syllabus **together** and agree to the classroom guidelines and policies.

student's name--PLEASE PRINT

student's signature

date

parent's/legal guardian's name--PLEASE PRINT

parent's signature

date

Contact Information:

In order not to interrupt class time, please feel free to email me any time. If you'd rather call, please do so before 7:30 in the morning or after 2:50p.m. Please indicate when it is possible to reach you at each number.

parents' email address(es)...please print your name above each address so I know who I'm contacting

work phone number

good time to call this #

work phone number

good time to call this #

home phone number

good time to call this #

cell phone number

good time to call this #

Last Year's Information:

Please be accurate with the grades. We need to make sure you are in the correct class.

name of math class last year

school name(if not MMHS)

teacher name

Fall Grade: ____ Spring Grade: ____