

AP Calculus BC

High School Course Syllabus, Mr. Felling, 2022-2023

Contact Information / Office Hours

Contact Info:

Email: sfelling@tuhsd.k12.az.us or sfelling@tempeunion.org (both forward to same account).

Phone: (480) 706-7900 ext. 70556

The best way to contact me is via email, although phone messages work too – I usually respond within a day or two at most - if I don't, try contacting me again, because something happened to your message.

Online information is in our course in Schoology.

I also maintain a mirror of most content on the general internet at: www.mrfelling.com

Office Hours/Tutoring: I work with students in the math office in C114 after school every school day except Wednesdays (due to early release meetings). I cannot work with students before school because I teach a zero hour class. No appointment needed, just come to the math office after school!

Course Description

MAT510/520 – AP Calculus BC

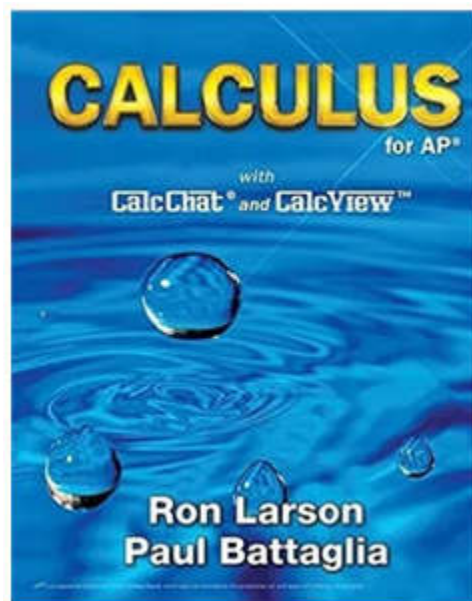
This course includes a thorough study of limits, continuity, differentiation, integration, infinite series and an introduction to differential equations. Topic concepts and procedures are taught along with many applications. The course will emphasize the importance of mathematics studied to date. After completion of this course, the student may wish to take the AP Calculus BC Advanced Placement Exam.

A more detailed course description listing individual topics is available on my website.

Textbook

We are using “Calculus for AP” by Ron Larson and Paul Battaglia for this course.

I recommend that you check out the textbook from the DV bookstore at the beginning of the year (the bookstore refers to this as the ‘sky blue calculus book’. We will assign homework from this textbook, and it also includes excellent explanations and examples.



Classroom Policies

Respect is expected – In order to learn, we must have an effective learning environment. We don't usually have behavior issues in honors math classes, but behaviors that disrupt the learning environment will not be tolerated. Learning also requires open communication, and people must feel safe to share their thoughts and ideas. I respect my students, and I expect students to respect me, each other, and themselves.

Attendance: Desert Vista policy is to consider students up to 20 minutes late to class tardy, and students more than 20 minutes late to class absent. **Please note:** Students with non-school related absences of 11 or more days from a class (excused or unexcused) in a semester may lose course credit for that semester. Please keep absences (including school-related) to a minimum. If you do need to miss class, information about what we covered and homework is always available at www.mrfelling.com.

Bathroom:

- Students should only use the bathroom for emergencies, please do not assume that you will go to the bathroom during class every day. If a student is using the bathroom frequently, I contact parents to report this. Time away from the classroom makes it difficult to stay caught up and learning.
- Only 1 student can be out of the room at a time, and they must obtain the bathroom pass from me.
- Students must return within a reasonable amount of time.
- Per school-wide policy this year, students must give me their cell phone in order to obtain the bathroom pass from me, and they must sign-in and sign-out noting the times out of the room.

Electronics:

- If I see electronics out at inappropriate times, I may choose to confiscate put the item on the teacher desk at the front of the classroom. Students may reclaim their item from the desk when the bell has rung at the end of class if I have not returned the item before then.
- For frequent offenders – at my discretion, I may opt to keep the item and turn it in to the front office administrators. School policy is to confiscate – and require parents to retrieve at the front office.
- **Please note that, in accordance with school policy, I am not, and the school is not, liable for loss of, or damage to confiscated items.** To be safe, students should not have electronics out of their backpacks in the classroom unless I specifically indicate it is appropriate.

Cheating: - Any communication during or after a test or quiz, or any other form of cheating, may result in penalties up to and including receiving a zero on the entire test or assignment.

How Your Grade is Determined

A letter grade is issued for each semester separately. The 1st semester grade is made up of 40% 1st quarter grade, 40% 2nd quarter grade, and 20% semester final exam. Each quarter's grade is determined by total points in two categories: Assessments (90% of your quarter grade) and Practice Work (10% of your quarter grade).

Grading Scale:

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

Rounding: For students earning borderline grades (for example, 89.5%) I determine rounding on a case-by-case basis, generally by considering your chapter test scores and your score on the final exam.

Grades will be updated on a regular basis (usually every weekend). You can check your grades online using your parent or student login for the Synergy online grade system. If you have questions about your grade, please feel free to email me at any time.

Content Knowledge, ~90% of grade

- **Unit Tests:** For each unit (chapter) there will be a summary test which covers all major ideas learned in the unit. The expectation is that students will use the various tools provided (lessons, textbook, classroom practice examples, homework, quizzes, etc.) to thoroughly learn the material in a unit by the date of the unit test. Tests will usually be from 70 to 100 points each.
- **Chapter Quizzes:** Most units will also include one or more quizzes to check understanding throughout the chapter. These are generally worth 20 points each or less.

Effort, ~10% of grade

- **Practice (homework):**
 - For each unit, you will receive a paper copy of a practice packet which contains all the problems you need to do for practice.
 - Homework must be completed in your handwriting on the provided paper copy. (Alternatively, if you prefer to work on a tablet, a PDF file will be available for

download in Schoology, but you must work the problems on the file in your handwriting).

- Each day, I will have you show me your previous day homework in class at the beginning of class, but I will also ask you to turn in your entire unit homework packet on the day of the unit test. (If you are using a tablet, you'll need to email me a PDF file with the problems worked).
- Homework is mandatory – not doing homework will reduce your grade.
- The homework packets are constructed so that, in general, for each odd numbered problem there is a corresponding even numbered problem with the same topic.
- It is recommended that you work all of the problems in the practice packet, however, only the odd problems will be checked.
- In Schoology, we will be posting answers only for odd problems, but fully worked solutions for even problems. So the idea is that you work a required odd problem and check your answer. If you got it correct, you can choose to work the even problem or skip it if you are pressed for time. If you are unable to work the odd problem, or got the wrong answer, then you try working the even problem, and look at the posted solution fully worked out. By looking at the even problem solution, you then go back and work the mandatory odd problem until you can get the correct answer.
- When I check homework at the beginning of each class I will be mainly looking to see that all the odd problems are attempted and good quality work is shown. Homework with some odd problems missing or where insufficient work is shown will receive lower homework credit.
- When I have you turn in your homework at the end of the unit, I will look more closely at the problems and may choose to grade some of the problems for correctness. Mainly, I'm looking to see evidence that you are using homework as intended: as a tool to practice important concepts from the course moving towards mastery.

Late work policy: Late work will be accepted, but will receive no more than half the usual amount of credit.

Extra Credit Opportunities: For Rio Salado college credit classes at DV, we generally follow Rio Salado's policy that the student's grade be a reflection of degree of math understanding and not be artificially boosted by excessive extra credit. However, we do include some ability for students to earn extra credit, always tied to math knowledge.

- **Test bonus questions:** On some tests, we may include bonus questions which might provide up to 5% of the test value as extra credit. This is mainly to allow students to work alternate math problems to demonstrate proficiency to make up for small errors on the rest of the test.

- **Class Participation:** To encourage lively and active participation in all class activities, I record every time a student is participating and sharing their thinking with the class. You can participate by:
 - Giving an answer with an explanation to a question asked during a lesson.
 - During group work, share your group's results with the class on the board.
 - Working a problem on the board for a homework question asked by another student.
 - Asking really insightful questions during a lesson.
 I have a system to record instances of participation and this can result in up to 2% extra credit in the homework category in the gradebook.

Projects: We may include one or more projects throughout the year. These will generally be graded for quality of effort and would be included in the homework/practice category in the gradebook.

Alternate semester grading scale: In keeping with historical methods of assigning the semester letter grade, we first compute the grade as usual using the 40% quarter + 40% quarter + 20% final exam system. But we also use the following chart to calculate the grade using the alternate semester grading scale:

Quarter Grades Are:	Semester Exam:	Final Grade Is:
A A	A B C D F	A B
A B	A B C D F	A B
A C	A B C D F	B C
A D	A B C D F	B C
A F	A B C D F	C
B B	A B C D F	B C
B C	A B C D F	B C
B D	A B C D F	C
B F	A B C D F	C D
C C	A B C D F	C
C D	A B C D F	C D
C F	A B C D F	C D
D D	A B C D F	C D
D F	A B C D F	D F
F F	A B C D F	D F

The letter grade assigned for the semester will be the higher of the two grades (the normally computed grade, and the alternate semester grading scale grade).

Absences, Makeup and Retakes Policy

The goal of this class is to guide students toward a complete mastery of course material. This is done by making incremental progress steadily throughout the course - much of the later material depends upon mastery of the previous course material. **It is very important that students attend class. New material or very important practice work happens every day.**

If you miss class, that class lesson is no longer available to you so you will need to find alternate ways to learn the material: watch the lesson video (available for most lessons), read the textbook, review online lecture notes, ask other students in class for help, come to after school tutoring for help, etc. Note that you are still responsible for knowing the material, even if you miss class. You need to read your textbook, get the practice problems off the website and stay caught up as best you can.

Our makeup and retake policy aims to encourage students to stay caught up at all times because this is so critical to overall success in the class:

Retakes: In accordance with Rio Salado policy and Desert Vista Math Department policy for college credit classes, there are no retakes for any unit test or quiz in this course.

Makeups: Tests must be taken by the date of the test except in very exceptional circumstances. In college, if you know that you cannot attend on a test day, you usually have to make arrangements with the professor to take the test early - please notify me as soon as possible if you know you have to miss a test so we can make arrangements for you to take an alternate version of the test at a different time.

Keys to Success in this Course

Class Notes: Lessons parallel the topics covered in our textbook, but I usually explain things in alternative ways. On Schoology and www.mrfelling.com, I provide printable 'blank class notes' for each chapter. We do need to spend some time in 'lecture mode' but to minimize time spent in lecture so you can spend more time practicing during class, the class notes greatly speed note-taking. Alternatively, you may choose to take your own, more abbreviated, notes. Class notes are not graded, but I highly recommend saving all class notes for the course, and bringing them every day for use during practice.

Calculators: Calculators are required for this class. We start using them the early in the course, and you will need them every day, including on some of the tests.

Recommended models: The Ti-84 family of calculators are highly recommended (Ti-83 will also work). All class examples will be done using a Ti-84plus.

Can I use other calculators? Yes, but you are responsible for learning how to use them on your own. We teach how to use the Ti-84. We do not use the additional functionality of Ti-89, Ti-86, or Ti-Inspire and these calculators have different (and more complicated) user interfaces.

Supplies:

- Paper – any kind.
- Pencil w/eraser.
- Graphing Calculator.
- Class notes for the course to date.

You do not need to bring your textbook to school, but please bring your calculator and all other supplies with you to class every day.

Use the online schedule to stay caught up: Please use Schoology or the www.mrfelling.com website to find the latest information on homework, upcoming tests and assignments. Our class page always displays the current week's schedule and homework. For previous or future weeks' homework assignments please click on the chapter calendar links below the weekly schedule.

A plan for success: If you do the following, you greatly improve your chances of succeeding in this class:

- Attend all lessons and work all the examples with me during class.
- If you are unable to get correct answers, or don't understand anything, ask questions as soon as possible in class. Keep asking questions until you understand. If there isn't enough time during class, come to after school tutoring.
- Don't wait until just before the unit test to ask questions - ask questions as soon as you don't understand something.
- Read the chapters in the textbook to get an additional explanation beyond what I provide in the chapter lessons in class.

- Use all the provided review materials to spend significant time at home reviewing for unit tests.
- Complete all homework with full work and participate frequently to maximize adjustment of your unit test scores.

I am looking forward to exploring this important and useful area of mathematics with you!

- Mr. Felling