

# CALCULUS AB POLICIES

## MRS. OCHSENBEIN

### RATIONALE

You should find that your first course in calculus is a bit different than the mathematics to which you have become accustomed. In particular you should find that visualization and active thinking become vital parts of your development in calculus. Gone are the days of passive learning—no more “just teach me the rules and shortcuts so that I can get the answer.” You will find that in calculus *sometimes* the procedure is more important than the answer. Calculus is very concept oriented, rather than product oriented. If you recall some of the difficulties that you may have had transitioning from arithmetic to algebra you can anticipate some of the feelings and frustrations that are to be encountered in making the transition from algebra/trigonometry to calculus. As our study and understanding of calculus develops and expands you will begin to realize that it is the key to a better understanding of chemistry and physics, as well as other mathematically based disciplines, just as algebra and trigonometry were the keys to these disciplines at a lower level. Many times the person who expects to pursue a career in a business related field wonders why they are so encouraged to continue their mathematical training to such a high level. The answer is quite simple. At the post secondary level, many business and economics courses are calculus based. As a matter of fact, approximately 50% of all college majors are calculus based! Calculus has traditionally been a subject into which few students have ventured. In the eyes of many students, and teachers, calculus is a subject which is accessible only to the very brilliant. In this class we will shatter that illusion.

The subject matter of this course, and the manner in which it will be taught, will enable the successful student to take the College Board’s Advanced Placement (AP) AB level calculus exam. Some of the topics you will be studying are: limits, infinite sums, derivatives, integrals, and various applications. Successful completion of the AP test means that the student will be eligible to receive credit for having completed a one semester calculus course at most colleges and universities in the country. (All students are encouraged to take the AP exam, but the exam is not required. Students are responsible for paying the fee for the AP exam, but please see the teacher if that is a problem.)

To be successful in Calculus a student must remember, understand and be able to apply the information presented in the previous courses including Algebra II, Geometry, College Algebra and Trigonometry. Thus final grades of A or B in those courses are strongly recommended for students taking Calculus. The first ten lessons will review some of that material, if more is needed please see the teacher for help early on in the course.

Historically students who have been most successful in this course and on the AP exam have been those who have been willing to put in the extra effort including coming in for help at the first sign of confusion, or when a class has been missed. To be successful you will need to work well. Lazy habits, such as skipping homework, not reading the lesson and not taking notes will most likely not lead to success. As a former student said in an email from his first year in college “Well I never thought I would say this but thank you for pushing me so hard in Calculus. I passed the AP test so I’m in Calculus II and I’m doing well. I am smarter than all of the sophomores and juniors in my class and the freshmen who need help come to me for the answers or actually they come to me for the correct way to do it not just the answers.”

## ATTENDANCE

Regular attendance is **very** important for your success in this course. After an excused absence it will be YOUR responsibility to find out what you missed. If you miss a test or quiz, plan to make it up on the first Advisement after you return. Try to arrange appointments for times that will cause the least interference with this class.

### **UNEXCUSED ABSENCE/TRUANCY**

Any absence that is not listed specifically as an EXCUSED absence will be considered to be unexcused. If the absence is unverified it is the student's responsibility to follow up on getting it changed to EXCUSED. According to school board policy, makeup work for unexcused absences will receive NO CREDIT (a ZERO) although the knowledge will be required. This includes tests, quizzes and any other assignment.

### **PRE-ARRANGED ABSENCE**

Anytime an absence can be anticipated it should be pre-arranged through the proper channels in the office. Failure to do so may result in that absence being unexcused. In pre-arranging you will receive your assignments before leaving. The work, including tests or quizzes, **MUST** be completed and turned in before you leave or no credit will be received. Away games and field trips are considered pre-arranged absences. Please check the school calendar when considering vacations if at all possible.

## TARDIES

You should be in your proper seat, with your material out and ready to work when the bell rings. The school tardy policy is in effect. In addition you will be awarded 100 free homework points each semester. Each time you are tardy (excused or unexcused) to this class you will lose 10 of those points. Those points will be the last homework grade of the semester. (If you are unexcused absent from this class you will lose 20 of those points.)

## GRADING PROCEDURE

GRADING SCALE			
1 <sup>ST</sup> SEMESTER		2 <sup>ND</sup> SEMESTER	<u>SEMESTER GRADE</u>
80.00 – 100	A	74.00 - 100	
64.00 – 79.99	B	56.00 – 73.99	Tests 70%
52.00 – 63.99	C	43.00 – 55.99	Quizzes 15%
40.00 – 51.99	D	30.00 – 42.99	Homework 15%
0 – 39.99	F	0 – 29.99	

*NOTE: The grades will NOT be rounded.*

The grades are weighted with A = 5, B = 4, C = 3, D = 1, and F = 0.

**EXTRA CREDIT:** The free homework points mentioned under “Tardies” will be the major extra credit. There may be some homework problems or assignments and some quiz problems with will be available for extra credit also. No other extra credit will be available.

## TESTS

Each semester there will be five tests and a semester exam. The tests will be of equal weight. Each will be 10% of the semester grade. The semester exam will be worth two test grades (20% of the semester grade).

First semester tests will begin in a format similar to College Algebra tests (20 questions each worth 5 points). Test # 1 will include five multiple choice questions. Each successive test will include a larger percentage of multiple choice questions. **You must show your work on each test question to receive credit for that question – this includes multiple choice questions.** Beginning with Test #2, and then every test thereafter, each test will be divided into two sections – a non-calculator section and a calculator active section. Toward the end of first semester you will be introduced to free response questions. Each test covers all previous lessons with major emphasis on the ten lessons ending with the number of the test (i.e. Test through 10).

Second semester tests will be only multiple choice and free response. They are graded in the same manner as the AP exam. Blind guessing to answer multiple choice questions could negatively impact your grade (an additional one-fourth of a point will be subtracted from the score for each incorrect answer, as is done on the SAT and the AP test). Leaving an answer blank does not carry the additional penalty. Free response questions are carefully scrutinized for method and procedures; a correct answer with no supporting work could be worth no points.

## HOMEWORK

Read and take notes on the lesson before it is presented in class. Be sure to copy any symbols, definitions and/or theorems presented along with any diagram/picture accompanying the. Write yourself a note with any concerns or questions you have after the reading. During the presentation of the lesson in class I will not give extra time to copy the information available in the reading, but I will explain it and go over examples. Be sure to ask those questions which still remain after the presentation. (There may be unannounced quiz questions for which you may use those notes.) In class add to or amend those notes to help with your studying.

Homework assignments will be made on a daily basis. The assignment will be due the day after it is assigned. Questions can be asked the day after the assignment is made. The assignment may be handed in that same day. Upon occasion the homework will be handed in at the beginning of the next class period. Most assignments will be collected and graded with the value of 1 point per attempted problem. It is your responsibility to do all the assigned work. Copying from the solutions manual will make success on the tests very difficult. Trying the problems and THEN checking the solutions is a much wiser choice. **Late work will NOT be accepted.**

### How to Earn Assignment Points:

- 1] Heading in the top margin must include your name, period and problem set number. Nothing else should be written in that top margin.
- 2] Skip and ENTIRE space between problems vertically, and skip an equivalent amount of space between problems horizontally.
- 3] Copy the original problem. If it is a word problem – state the important information. Show the algebraic steps. “BALD” answers (ones without work) are not acceptable.
- 4] Sketch any pictures that are drawn or described.
- 5] If the problem requires a formula – write it down as your first step.
- 6] Solve the problem vertically – not sideways. Show all work. Just an answer is unacceptable. Equal signs should be in a somewhat straight vertical line.

- 7] Only put ONE line of writing in each space and at most two problems across the page.
- 8] Use a pencil, or blue or black ink.
- 9] Use an eraser. DO NOT scribble out incorrect work, either erase it or put a next X through it.
- 10] Problems should be numbered sequentially. Do not skip around.
- 11] Give exact answers whenever possible as well as approximate answers correct to three decimal places.
- 12] All answers are available on the web. You are responsible to check your answers each night in order to be ready to ask questions in class the next day.

## **QUIZZES**

Short quizzes will be given. They could include questions from the notes, problems similar to or directly from the homework, multiple choice, free response, or written response questions. The questions may be worded in a slightly different manner to check for deeper understanding. Since I do NOT write the questions for the AP exam a variety of wording/types of questions is beneficial.

## **REQUIRED MATERIALS**

1. Three ring binder notebook (Organization will be a tremendous asset to you.)
2. Filler paper (All homework should be done on filler paper.) Be sure to remove any fringe (“Yuckies”) from the paper if you use spiral notebook paper.
3. Straightedge (for graphing purposes)
4. Pencils and erasers or pens (ALL test or quiz work for this class must be done neatly, using a pencil.)
5. Graphing calculator (The AP Calculus exam in May **requires** a graphing calculator, scientific calculators are forbidden as are TI-92 and others with a QWERTY keyboard.) Only calculators approved for the AP exam will be allowed. A graphing calculator will be required on tests in this class. On a test or quiz you will not be allowed to share calculators, nor will I lend a calculator. Most demonstrations will be done with a TI-83 Plus.

## **CLASSROOM CONDUCT**

You are young adults – I will expect you to behave as such. Inappropriate talking or behavior during class will not be tolerated. I expect your cooperation in maintaining an appropriate teaching/learning/studying environment at all times. As this is a calculus course I expect to see only calculus homework being done.

Food, including candy, is not permitted. You may bring a water bottle, but no other drinks. Gum is acceptable, as long as it does not distract from the work of the class.

The school dress code will be enforced.

Passes to leave class to use the restroom will be on an emergency only basis. There will be no passes during the first or last ten minutes of class, nor there passes to the lockers or vending machines. If you do use a pass, you must sign out when you leave and back in when you return. You must have a written pass from me to be permitted to use the office telephone. You must have a pass from counseling to go there during class. The bell at the end of the period is a signal for me to finish my statement and excuses you; please do not leave until I have excused you.

Electronic devices are not to be used during class without my permission. Cell phones, game boys and calculators may not be used to play games in the classroom at any time. Cell

phones need to be turned off and may not be used during class. Using an electronic device without permission will result in the device being turned over to an administrator.

CHEATING: If there is evidence of cheating on tests or quizzes, **all** involved will receive a ZERO, a phone-call home, and a written referral.

## **INDIVIDUAL HELP**

Some difficulties ARE expected from EVERYONE at some point during the course. When you find yourself beginning to have difficulty take appropriate action. Extra help will be available before, or after school almost daily and during advisement. Before and after school and during Advisement I will be in Room 214. Please let me know if you plan to come in for help so that I can inform you if I have a conflict. My planning periods are 2<sup>nd</sup> and 3<sup>rd</sup> periods.

My voice mail number is 303-387-4213.

The best way to reach me is by e-mail. My e-mail address is: Dorothy.Ochsenbein @dcsdk12.org

## **GOOD LUCK**

*Calculus was not invented in a single day – don't try to learn it in a single day.*

*Don't learn the tricks of the trade at the expense of learning the trade.*

**EXCELLENCE IS FOR EVERYONE !!!**