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**AP CALCULUS AB SYLLABUS**

**Mr. Yang**

**2013- 2014**

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**Classroom Expectations**

1. Be on time
2. Be prepared
3. Be respectful

**Course Description**

The objective of this class is to offer an instructional environment where every student has a full opportunity to learn, study, and make discoveries in the different areas of calculus. Focus for this semester will be on a review of functions and their graphs, an investigation of limits, and a rigorous study of derivatives and their applications. The students will be challenged to apply their knowledge to a number of real-life applications by working together on in-class group activities, and by individual efforts on homework assignments. The use of technology is a necessity, and graphing calculators will be frequently incorporated into the lessons.

**First Semester Units**:

# I. Chapter P sections 1-3 Preparation for Calculus (~ 5 days)

II. Chapter 1 sections 1-5, ch 3 section 5 Limits and Their Properties (~ 13 days)

III. Chapter 2 sections 1-5 Differentiation (~ 15 days)

IV. Chapter 3 sections 1-4, 6 Applications of Differentiation (~ 12 days)

V. Various sections from ch 2, 3, and 8 Optimization, Related Rates, L’Hopital’s Rule (~ 9 days)

VI. Chapter 5 sections 1, 3, 4, and 5 Exponential & Logarithmic Functions (~ 12 days)

VII. Various sections from chapters 1 – 5 Trigonometric Functions (~ 13 days)

**Second Semester Units:**

# I. Chapter 4, sections 1-6 Antiderivatives/Integration (~ 17 days)

II. Chapter 5, sections 2, 4, 5, 7 Integrals of Logs and Exponentials, (~ 15 days)

 Chapter 6, sections 2, 3 Slope Fields and Differential Equations

III. Ch 7, sections 1, 2 Area and Volume (~ 9 days)

IV. AP Exam Review (~ 40 days)

## Homework: Homework is as vital to your success in this class as attendance. Homework will be assigned daily, and must be completed by the beginning of class on the following day. Students will not be penalized for incorrect answers on homework assignments, but you will receive a zero if you have not at least attempted to solve each problem assigned. All problems assigned for each section are handed out at the beginning of the semester (although changes may be made as needed).

## Quizzes and Tests: Several quizzes will be given throughout each unit, and a test will be given at the end of each unit. These will be consistent with the material that has been covered in class and through homework assignments. Although they will primarily cover only the current unit being studied, problems that require knowledge from past topics may also be included. Tests will often be in the format of the AP exam, and will be graded in a manner similar to the exam. Because of this, all problems that require rounding must always be rounded to 3 decimal places unless stated otherwise in the problem. Points will also be deducted for missing or incorrect notation.

**Notebooks**: Each student must maintain a3-ring notebook and copies must be kept of all notes, homework, worksheets, quizzes, tests, and problems of the day. Each day's notes and homework assignments should be labeled with the date and the chapter and section being studied. All sections of the notebook should be maintained in a neat and organized manner.

## Extra Credit: With the exception of the problem of the week and occasional bonus problems on tests, extra credit is not offered in this class. All grades must be based on the student’s knowledge of the core material.

**Textbook Info**

* Calculus of a Single Variable
* Houghton Mifflin
* ISBN 0618503048
* $103.10
* Online textbook homework pages: <http://college.cengage.com/mathematics/blackboard/content/larson/calc8e/calc8e_solution_main.html?CH=00&SECT=a&TYPE=se>

**Grading Scale**

# Homework: 15% Project(s): 10%

# Tests/Quizzes : 60% Final Exam: 15%

**Make-up Work**

Making up work due to absence is the responsibility of the student. Make-up work will be accepted up to one week after the return of an excused absence(s). If a student misses a quiz, test, or project due to an unexcused absence, 10% will be automatically deducted from the student’s grade. You WILL make up any missed quizzes or tests on the day of your return. You may do this either before school or during the class period. Missing a review day does not exempt you from taking the assessment. Multiple absences will be handled on a case by case basis.

**Recovery Policy**

Opportunities designed to allow students to recover from a low or failing cumulative grade will be allowed when all work required to date has been completed and the student has demonstrated a legitimate effort to meet all course requirements including attendance. Students should contact the teacher concerning recovery opportunities. Teachers are expected to establish a reasonable time period for recovery work to be completed during the semester. All recovery work must be directly related to course objectives andmust be completed ten school days prior to the final exam.

**Eligibility**

In order to be eligible for recovery, student must

* fail the unit assessment
* have a unit homework average of 90%

**Recovery**

* Students must initiate recovery within one week of return of the test
* Students will take a new unit recovery test.
* Students may recover up to a 70% which will replace the original grade.

**Help Hours**

7:30 – 8:15 most day to provide individual assistance and instruction, although parent conferences and faculty meetings can sometimes interrupt this time.

**Tardy Policy**

1st Tardy – Warning 2nd Tardy – Warning/Parent Contact 3rd Tardy – Private Detention/Parent Contact

4th Tardy – Administration Referral/Parent Contact 5th Tardy and Beyond – Additional Administrative Referral

**Cell Phones**

During instruction and classwork time, **cell phones are to be off your desk in your book bags**. Violations will be handled similarly to the tardy policy.

**Hall Pass**

2 Hall passes available. Ask permission before going. They are not to be used during instruction time or when going over homework

**Final Exam Exempt Policy**

 Seniors will be required to take spring final exam, no exemption! Seniors can exempt from final exam week, but not spring final exams.

**Milton Honor Code**

I understand that academic integrity creates a strong academic and ethical environment at Milton High School. I pledge that I will be personally responsible for upholding the values of academic integrity by being honest and not tolerating academic dishonesty.

AP Calculus 2013-2014

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_

Parent/guardian name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Work phone:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email Address:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cell phone #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Home phone#: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/guardian name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Work phone:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email Address:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cell phone #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Home phone#: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Parent/guardian signature:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_date:\_\_\_\_\_\_