**Streamwood High School**

**Syllabus for AP Calculus AB**

Mrs. Severson Office: C202

630-213-5500 ext. 8507 Office Hours: periods 1 & 4, first half of 8th

carolynseverson@u-46.org also before school, my lunch is 6th hour

**Course Description:**

Students who have successfully completed pre-calculus may take AP Calculus AB. This course covers material comparable to one semester of college calculus. This course ***prepares all students*** for the AP Calculus AB test on **May 9, 2017**. See www.collegeboard.org for more information.

**Textbook and Materials:**

*AP Edition Calculus,* 9th edition. Larson, Edwards. Brooks/Cole Publisher 2010. TI-84+ or TI+ CE (color edition), or TI-Nspire **graphing calculator** is required.

**Useful websites: www.brightstorm.com, www.khanacademy.com, www.calculus-help.com**

**www.mrsseverson.weebly.com**

* work with functions graphically, numerically, analytically and verbally
* use various techniques to determine limits and if they exist
* use the rules of differentiation to find derivatives
* find critical values, local & global extrema, points of inflection
* apply derivatives to slope, motion, related rates, linearization, and graphs
* use technology to help solve problems, experiment, interpret results, and verify conclusions
* understand the relationship between the derivative and the definite integral in the Fundamental Theorem of Calculus
* apply the concept of the integral as a Riemann sum
* apply basic integration formulas
* apply techniques of integration (u-substitution) and evaluate integrals
* use integration to solve problems involving area under curves, average value of a function and volumes of solids
* determine the reasonableness of solutions
* communicate mathematics both orally and in well-written mathematical sentences to explain solutions and reasoning

**Course Objectives/Learning Outcomes:**

**Course Organization:** Our first semester we will cover topics related to differential and its applications. Second semester covers integral calculus and its applications (chapters 4, 5, and parts of 6, 7, & 8). Fourth quarter is spent preparing for the AP exam. We use the book*, Fast Track to a Five* during fourth quarter.

**Course Policies:** ***Attendance/Tardiness*:** Regular attendance and being on time to class are expected for all classes. Absence from school is the greatest single cause of poor achievement in school. Successful students are seldom absent or tardy. The High School Attendance Program will be followed as outlined in your student handbook.

***Class Participation*:** Students are expected to participate in class by taking notes, engaging in class discussions and activities. No *individual* extra credit will be given.

***Missed Tests/Exams or major assignments*:** For excused absences, the test, quiz or homework is to be made up by the number of days excused. Test/quiz will be made up in the Sabre Center. Students on field trips must be prepared to turn in the homework that was assigned that day. Also students are to be prepared to take any test or quiz given on the following day and may have an alternate form.

***Electronic Devices*:** Electronic devices are defined as cell phones, I-pods or other MP3 player, and gaming platforms (DS/DSI, PSP/PSP go, game boys). Students are responsible for the safe keep of their electronic devices. Students are allowed to use electronic devices in the green zone before and after school and anytime during periods 1-8. The green zone is Cafeterias A, B, & C. The green zone is marked with green tape. The rest of the building is a red zone. Students who use their electronic device in the red zone will have their device taken away and **cannot get it back until a PM is served.** None of these devices are to be used in class. SHS is **not responsible** for lost or stolen electronic devices.

***Academic dishonesty*:** Academic Dishonesty refers to cheating, copying, plagiarizing, or otherwise representing the work of others as one’s own through verbal, written, graphic, electronic, or other means. Students determined to have been academically dishonest are subject to disciplinary action. Consequences will depend on the severity of the offense, the number of offenses, the impact on other students and teachers, and/or the curriculum. Academic dishonesty undermines the learning process and will not be condoned.

***Grading Policy*:** Students will be assessed the following ways

 Semester Coursework (before the final exam)

 Tests 50% of semester coursework

 Quizzes 30% of semester coursework

 Homework 20% of semester coursework

Homework will be checked for completeness/effort during the week and will be turned in the following Monday.

 Semester Exam 20% of semester grade

**Grades are determined with the 0 – 4 scale using MARKS and are entered into Infinite Campus.**

**Grades are as follows: A 3.21 – 4.00; B 2.41 - 3.2; C 1.61 – 2.4; D 0.81 – 1.6; E 0.8 or below.**

***AP TEST – Tuesday May 9, 2017***

**All students will take the AP test or a “mini” AP exam in class**. This will count as **two** test grades. Tests taken in class will be graded with the same criteria as the actual AP test; those taking the AP test will receive one A- (90%)\* or a B- (80%) and the second grade that averages the first & second semester grades at that point. It is the student’s responsibility to sign up for the AP test.

\*= student will participate in a minimum of 3 full review sessions/documented online practice sessions

***Classroom Behavior Expectations*:** We are SHS: we are safe (all students must wear their IDs). We hold ourselves accountable by **asking questions, being prepared** - ready for class, discussions, quizzes or tests.We show respect and enhance our understanding by **working together. We contribute and consult**. We do our homework **on time** and get help (from me or your peers) when you have questions. "The price of success is hard work, dedication to the job at hand, and the determination that whether we win or lose, we have applied the best of ourselves to the task at hand."
**-Vince Lombardi**