

AP Calculus (AB) 2008-2009

Mr. Craig Smith

Course Overview

It has been said the calculus is one of mankind's greatest accomplishments. Since its conception, over 300 years ago by Newton and Leibniz, calculus has been used to solve problems in mathematics, science, engineering, biology and other fields. Specifically, calculus is often used to answer questions such as, "how fast does a quantity change," and "how much change has occurred over a given time interval." These questions lead to the study of rates of change (derivatives), accumulated change (integrals), and convergent or divergent processes (limits). How quantities are related (functions) and how they are represented (graphically, analytically, numerically, and verbally) are also key aspects of calculus.

Course Objective

It is nearly impossible to pass the AB AP Calculus exam without a solid conceptual grasp of calculus. Rote memorization of formulas and solution strategies is of little use without a foundational understanding to support those formulas and strategies. Therefore, the primary goal of this course is to learn calculus with understanding. Unlike some calculus courses which focus mainly on algebraic manipulations, this course postpones the extensive use of memorized rules and algorithmic procedures until students have a firm understanding of the concepts required to support meaningful work with symbolic expressions.

Textbook and Materials

Calculus: Single Variable, 4th Edition, Hughes-Hallett, Gleason, McCallum, et al.; New York: John Wiley and Sons, 2005. The textbook is provided by the school.

Students should bring their own paper, mechanical pencil, eraser and a graphing calculator (83, 83-plus, 83-plus silver edition, 84-plus, or 84-plus silver edition) to class each day. Class notes, homework assignments, etc. should be kept in a three-ring binder, spiral notebook, bound notebook, or some other type of organizer.

Classroom Atmosphere

Be Professional, Courteous, Respectful and Honest.

Do not use cell phones, IPODS, or other similar electronic devices during class.

Due to the difficult nature of this course, students must be very focused during class; therefore, violations of the above will be handled in a private conference with Mr. Smith. Severe violations will be brought to the attention of parents and/or administrators. Students are highly encouraged to work together both in and out of class. However, students must still do their own work. Zero credit will be given to students who cheat.

Late Policy

Since this is a college level course, no late work will be accepted without a "Personal Day" coupon.

After an absence (due to illness or a school/family activity), students should, on the day following their absence, request a "Personal Day" coupon. Mr. Smith will note on the back of the coupon those assignments missed by the student. Therefore, a single coupon may be used to submit all of the late work that was due on the date the student was absent. To receive full credit, the student must submit the late work, with the corresponding coupon, within 2 weeks of the original due date. Work submitted without a "Personal Day" coupon or work submitted more than 2 weeks late will receive half credit.

Standards for Completing Assignments

For all homework, quizzes, tests, and other assignments, students will be required to "show their work." In other words, students must do more than simply give a numerical answer to a problem. Specifically, they will be expected to present a detailed, organized, and easy to follow solution for every problem they are requested to solve. They will be required to justify their solutions in plain English, using written sentences as well as numerical, graphical, and analytical arguments as appropriate.

To facilitate neat and organized work, and to allow for the correction of errors, students are encouraged to do all work in pencil (a mechanical pencil is preferred).

Grading and Grade Scale

Grades are based on four categories (see below). The grade scale for this class is also shown below. On average, students should plan to spend approximately 2 hours per homework assignment.

Category	Percentage of Grade
Tests	60%
Homework	20%
Quizzes	10%
Work Ethic	10%

Letter Grade	Percent Range
A	93 and above
A-	90 to 92
B+	87 to 89
B	83 to 86
B-	80 to 82
C+	77 to 79
C	73 to 76
C-	70 to 72
F	0 to 69

Attendance Policy

As outlined in the Lone Peak High School attendance policy, students in this class are allowed a total of **four excused absences** and **three tardies** per term. **No unexcused absences** are allowed. Exceeding these limits will automatically result in loss of credit (NC) for this class. However, absences and tardies can be made-up via the Lone Peak attendance school. Also note that school excused absences do not count towards the four absence limit. Complete details regarding Lone Peak's attendance policy and the attendance school are available on Lone Peak's website (www.LonePeak.AlpineDistrict.Org).

Contact Information

cbsmith@alpine.k12.ut.us 717-4568 ext 805

NOTE: When sending an email, you must begin the Subject line of the email with "Parent of". Otherwise, the email will not get past the school district's spam filter. For example, if the email is from Jane Smith, the Subject line of the email should read, "Parent of Jane Smith".

Mr. Smith is available for student consultation before (7 :15 to 7 :40 am) and after school (2 :15 to 2 :45 pm).

For the Student

I have read the attached document and agree to participate in this class and follow the policies outlined.

Print student name

Student signature

For the Parent

I have read the attached document and agree to let my student participate in this class and follow the policies outlined.

Print parent name

Parent signature

Parent email address

Parent phone number(s)

Best time to contact