

COURSE DESCRIPTION and PREREQUISITES

AP Calculus AB is a 1-credit course covering topics from Differential Calculus, Integral Calculus, and Differential Equations. The ideas of limits, continuity, derivatives, and integrals are explored at a depth of understanding consistent with college-level study. Broad concepts and widely applicable methods are emphasized, rather than memorization of particular problem types. The graphing calculator is used as an aide in understanding, estimating and confirming results. Completion of Precalculus (or the equivalent), and permission from the Mathematics Department, are prerequisites for this course.

Students are required to sit for the AP Calculus AB exam on Tuesday, May 3, 2004, at 8:30 AM.

TEXTS and SUPPLIES

TEXTS:

AP Calculus AB, Kaplan, 2004 edition. This is a dedicated AP prep book, and we will carefully go through every page and every problem before the AP test.

I wrote a calculus book in 1993, entitled **Understanding Calculus**, and you will receive regular handouts from this book, together with additional supplemental material.

We'll also cover **One Mathematical Cat, Please!** by Carol J.V. Fisher, which explores mathematical language issues. The book is available in spiral-bound form at the MHS bookstore (purple cover), and is also available on the web:

http://fishcaro.crosswinds.net/cat_book.htm

TI-83 GRAPHING CALCULATOR

You need a TI-83 graphing calculator for class, homework, and exams. Calculator skills will be developed throughout the course.

3-RING BINDER and DIVIDER SHEETS

A 3-ring binder (at least 1.5" ring size) is strongly recommended to organize all class materials. Please make tabs for:

GRADE SHEET

SYLLABUS

INDEX CARDS

OTHER

INDEX CARDS

Index cards (4" × 6", both sides un-ruled) are used to summarize important material. You may want to purchase a 3-hole punched plastic zippered pouch in which to keep your index cards.

SUPPLY LIST

- textbook: **AP Calculus AB**, Kaplan, 2004 edition
- One Mathematical Cat, Please! (purple cover; optional; available on web)
- TI-83 graphing calculator
- 3-ring binder (recommend at least 1.5" ring size)
- index divider sheets
- 4" × 6" index cards, both sides un-ruled, at least 100
- 3-hole punched plastic zippered pouch (optional)

THE “INDEX CARD” LECTURE METHOD

All the important ideas in the course are summarized on index cards, which become a primary study source for exams and quizzes. Here’s how the “index card method” works:

- You will receive copies of the index card material; the sheets are pre-punched to put in your 3-ring notebook.
- Quickly read over the sheet(s) before coming to class. This way, you have a preview of what we’ll be talking about, making you more receptive to the ideas.
- After class, copy the material onto an *actual* index card. As you write the card, **THINK!** Make sure that you understand *everything* you’re writing down. Feel free to add additional material to make the index cards more useful to you.
- Index cards are passed in and graded at the midterm and endterm exams. Each card is worth 2 points (1 point for each side).

QUICK QUIZZES

At the beginning of each class, there is a ‘Quick Quiz’ over material from the previous day. This Quick Quiz may be:

- doing one of the assigned homework problems, or a similar problem
- answering a basic question from the previous day’s index card(s)

The Quick Quizzes are graded with a ‘1’ (one point) or an ‘N’ (Not completely correct). Points accumulated on the Quick Quizzes are added into your point total as **BONUS POINTS**. Consequently, they can’t hurt your grade, but can certainly help! There are no make-ups on Quick Quizzes. Quick Quizzes are discarded immediately after grading.

An unexcused late or unexcused absence causes you to lose a Quick Quiz point. (I record “-1” on the Quick Quiz sheet.)

QUIZZES and EXAMS

Almost every week there will be a 40-point quiz over the material covered since the previous quiz/test. These quizzes comprise a significant part of your course grade. Take them *very* seriously!

There will be a midterm and an endterm exam, each worth 80 points.

There will be quizzes over the CAT book, and over the web exercises.

There will be a wide variety of additional quizzes and worksheets.

PREREQUISITE QUIZ: The first weekly quiz (Monday, September 20) will cover the Sample Prerequisite problems.

LATE POLICY

Recall that there are no make-up Quick Quizzes. The Miss Hall’s School late policy applies to any other missed work: “A student who has been absent must be prepared to submit all missed classwork within 48 hours of her return. A student should be prepared to take a quiz or test upon her return if the material was covered prior to her absence. A 10% per day grade reduction will be applied to any outstanding work after the 48 hour grace period.”

EFFORT HONOR ROLL

A student is voted to the Effort Honor Roll when she has worked consistently throughout the term to be the best student she can be in all of her classes. Any one of the following reasons is sufficient to prevent a girl from receiving a recommendation for Effort Honor Roll: an unexcused absence; non-participation in class; lack of preparation for class; tardiness to class.

YOUR NUMBER IS ...

Your Miss Hall's locker number is your number for the year. This number should be written on all tests and quizzes. Also, your personal folder is identified with this number. If you miss class, check your folder for papers that may have been distributed while you were absent.

GRADING

You will accumulate points throughout each term. Here's an example: if there are 994 possible points, and you accumulate 765 points, then your numerical term grade will be determined by computing $\frac{765}{994}$ and using normal rounding, yielding 77%. Each student is provided with a grade sheet which is used to keep track of your grade throughout the term. Here are some of the points for the Fall term:

<u>graded item</u>	<u>approximate # of points</u>
INDEX CARDS	50 cards $\cdot \frac{2 \text{ pts}}{\text{card}} = 100 \text{ pts}$
WEEKLY QUIZZES	10 quizzes $\cdot \frac{40 \text{ pts}}{\text{quiz}} = 400 \text{ pts}$
CAT QUIZZES	9 sections $\cdot \frac{10 \text{ pts}}{\text{section}} = 90 \text{ pts}$
WEB QUIZZES	124 exercises $\cdot \frac{1 \text{ pt}}{\text{exercise}} = 124 \text{ pts}$
MIDTERM EXAM	80 pts
ENDTERM EXAM	80 pts
FINAL EXAM	120 pts
QUICK QUIZZES	BONUS POINTS

Each term, the final exam grade may be used to replace a poor exam grade.

TERM GRADE:

	$A : [93, \infty)$	$A^- : [90, 93)$
$B^+ : [87, 90)$	$B : [83, 87)$	$B^- : [80, 83)$
$C^+ : [77, 80)$	$C : [73, 77)$	$C^- : [70, 73)$
$D^+ : [67, 70)$	$D : [63, 67)$	$D^- : [60, 63)$
$F : < 60$		

EXAM DATES and FINAL EXAM DATES:

All exam dates are listed on your Grade Sheets.

COURSE GRADE: Your course grade will be the average of the Fall and Spring term grades.

WEIGHTED GRADES FOR AP COURSES: The semester average of a student enrolled in an Advanced Placement course is weighted by two points. This weight affects the student's grade point average, when the GPA is computed and recorded on the transcript and shared with prospective colleges. Additionally, this weight can favorably influence a student's semester average, helping her to earn recognition on the Head's List or Honor Roll.

SENIOR FINAL EXAM EXEMPTION POLICY: Any senior with a 90 or above (before weighting) at the end of the Spring semester, is exempt from the final exam.