



Gifted LearningLinks Program Course Syllabus

Instructor name: C. Mehler

E-mail address: xxx@xxx.xxx

Course Title: AP Calculus BC

Course Description:

This course will cover intermediate topics in differential and integral calculus. The student will pursue these topics through self-study.

At the end of each chapter, there will be two forms of evaluation: a chapter exam, to be taken under the auspices of a proctor in the student's home town (100 points each), and a lab assignment (10 points each), to be handed directly into the instructor. Please wait for a grade on the lab assignment before taking a chapter test.

If the student begins this course on schedule during Fall session, the final goal is to participate in the AP Exam in May. If the student begins at a different time, the goal will be to participate in the AP Exam the following May.

The student pursuing this course is expected to have a strong background in basic calculus skills. These skills are covered in Chapters P through 5 of the text.

Outcomes:

We cover everything in the Calculus BC topic outline as it appears in the *AP Calculus Course Description*. The two overriding objectives of this course are that the students do well on the AP Exam and in subsequent courses.

After finishing this course, students will be able to compute and/or analyze mathematical problems in the following subject areas:

- Differential equations
- Applications of integration
- Integration techniques
- L'Hopital's rule
- Improper Integrals
- Infinite series
- Conics
- Parametric equations
- Polar coordinates
- Vectors and the geometry of space
- Vector-valued functions

This curriculum mirrors the curriculum for the College Board's AP Calculus BC course.

Resources and Materials:

Larson, Hostetler, & Edwards, *Calculus, 8th edition*, Houghton-Mifflin, © 2006

You will also need a graphing calculator. Any TI-8x series will work. Please be warned that the instructor tends to stress being able to do your calculus without the need of calculators or tables. For those examples requiring expanded calculation, the instructor is available to show you how to do this using a spreadsheet like Microsoft Excel. This will be especially helpful for numerical integration.

Student Evaluation and Grading Policies for Credit Courses Only:

CTD Grading scale:

| | | | | |
|------------------|-----------------|-----------------|-----------------|-------------------|
| A+ 97-100 | B+ 87-89 | C+ 77-79 | D+ 67-69 | F Below 60 |
| A 93-96 | B 83-86 | C 73-76 | D 63-66 | |
| A- 90-92 | B- 80-82 | C- 70-72 | D- 60-62 | |

Each of 7 chapter tests is worth 100 points each. Each lab assignment (regular, oral, calculator) is worth 10 points each. A penalty of 2 points on labs, 20 points on chapter tests, may be assessed for unexcused lateness. In the event that you know in advance that you are going to be late with an assignment, please have a parent call or e-mail the instructor. The instructor's main concern is that the student maintain contact, even when there is difficulty.

If at the end of the nine-month session a student is unhappy with her/his grade, the student may take an optional final based upon questions missed in regular unit exams. On that optional final, the student may bring her/his grade up to 90% (A-). It is the student's responsibility to notify the instructor of the desire to take the optional final, as well as plan time-wise to be able to complete the optional final by the end of the session.

IMPORTANT: Labs are sent to the instructor directly by the student via scan-and-e-mail or fax. In contrast, the student in this class will be required to find a proctor to administer chapter tests (six in all over the session). The proctor may not be an immediate relative or close family friend. Otherwise, any responsible adult (18+ years old) with a working e-mail address will suffice. In the past, students often have used school personnel, clergy, neighbors, arts/sports coaches, and human relations personnel at a parent's place of business.

Instructor Biography:

Charlie Mehler has worked for the Center for Talent Development in various capacities (online, Saturday Enrichment Program, Summer Program) for ten years. He has taught math and computer operations for nearly a quarter century. Currently, Charlie is at work on a PhD in his other area of academic interest, theatre.



Contact Information:

E-mail address: xxx@xxx.xxx
Home telephone: xxx-xxx-xxxx
FAX: xxx-xxx-xxxx

Please do not hesitate to contact the instructor if you have any questions or concerns.

Schedule:

Please see Course Operation and Timelines.

GLL Sample