



Gifted LearningLinks Program Course Syllabus

Instructor name: C. Mehler
E-mail address: xxx@xxx.xxx

Course Title: Precalculus Honors

Course Description:

Prerequisites: Algebra I & II, Geometry

Precalculus Honors prepares the student for the study of differential and integral calculus. Students will solve application problems involving linear, quadratic, polynomial, exponential, logarithmic and trigonometric functions. Students will apply vectors, sequences, series and matrices to their mathematical problem solving. Advanced topics in functions and graphs, trigonometry, discrete mathematics, combinatorics, and precalculus will be covered. This course will prepare participants for the study of calculus by learning how to apply limits and continuity.

Outcomes:

Upon successful completion of this course, students will know, understand, and be able to perform various operations involving the following topics in precalculus:

Unit I

Chapter 1: Graphs

Chapter 2: Functions and their Graphs

Unit II

Chapter 3: Linear and Quadratic Functions

Chapter 4: Polynomial and Rational Functions

Chapter 5: Exponential and Logarithmic Functions

Unit III

Chapter 6: Trigonometric Functions

Chapter 7: Analytic Trigonometry

Chapter 8: Applications of Trigonometric Functions

Unit IV

Chapter 9: Polar Coordinates; Vectors

Chapter 10: Analytic Geometry

Chapter 11: Systems of Equations and Inequalities

Unit V

Chapter 12: Sequences; Induction; the Binomial Theorem

Chapter 13: Counting and Probability

Chapter 14: A Preview of Calculus; The Limit, Derivative, and Integral of a Function

Resources and Materials:

TEXT: Sullivan and Sullivan, *Precalculus Enhanced with Graphing Utilities* (fifth edition) © 2009. The binding is white, and has a set of x- and y-axes with a brown and tan ring.

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 14 chapter quizzes is worth 10 points each. Each of 5 unit tests is worth 100 points each. A penalty of 2 points on quizzes, 20 points on unit 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 (March 1, 2009).

IMPORTANT: Chapter quizzes 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 unit tests (five 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
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Please do not hesitate to contact the instructor if you have any questions or concerns.

Schedule:

Please see Course Operation and Timelines.

GLL Sample