



**KENOSHA UNIFIED SCHOOL DISTRICT NO. 1
CURRICULUM AND INSTRUCTIONAL SERVICES**

HIGH SCHOOL COURSE SYLLABUS

MATHEMATICS DEPARTMENT

Trigonometry (342010)

Number of Credits: .5

Prerequisites

Successful completion of geometry (321011 & 321012 or 322021 & 322022) and Algebra 2 (331011 & 331011 or 332021 & 332022)

Course Description

This course prepares students for further studies in mathematics or for work in technical fields. Students learn the six trigonometric functions and demonstrate their use in the identities, inverse functions, radian measures, and special triangles. This course is a good foundation for math analysis.

Relevance

This course provides students with a background in both circular and periodic trigonometric functions. Its usefulness will be found in upper level math courses as well as several technical fields. Further, it will prepare students for items that will be encountered on college entrance exams and/or placement tests.

Course Standards

- | | | |
|---------------------------|----------------|-------------------------------|
| A. Mathematical processes | C. Geometry | E. Statistics and probability |
| B. Number relationships | D. Measurement | F. Algebraic relationships |

Most essential benchmarks may be viewed at: www.kusd.edu.

Lifelong Learning Standards

- | | | |
|------------------------|--------------------------|------------------------|
| • Knowledgeable person | • Effective communicator | • Quality producer |
| • Complex thinker | • Self-directed learner | • Contributing citizen |

Lifelong learning benchmarks may be viewed at: www.kusd.edu.

Course Outline

- Trigonometric functions: Angles, angle relationship and similar triangles, trigonometric functions, using the definitions of the trigonometric functions.
- Acute angles and right triangles: Trigonometric functions of acute angles, trigonometric functions of nonacute angles, finding trigonometric function values using a calculator, solving right triangles
- Radian measure and circular functions: Radian measure, applications of radian measure, the unit circle and circular functions

- Graphs of the circular functions: Graphs of the sine and cosine functions, translations of the graphs of the sine and cosine functions, graphs of other circular functions
- Trigonometric identities: Fundamental identities; verifying trigonometric identities; sum and difference identities for sine, cosine, and tangent; double-angle and half-angle identities
- Inverse circular functions and trigonometric equations: Inverse circular functions, trigonometric equations
- Applications of trigonometry: Oblique triangles and the law of sines, the ambiguous case of the law of sines, law of cosines

Board-Approved Instructional Materials

Lial, Hornsby, and David Schneider. *Trigonometry*, Eighth Edition, Prentice Hall, 2005 (ISBN 0-321-22736-0)

Tutorial Web Site: www.interactmath.com

Parents as Partners

Family involvement is an essential element for a student's success in mathematics. Be positive and support homework, don't do it for them. Think of yourself as a guide rather than your child's teacher. You can help by asking questions and listening. You may also help by visiting the online resources and encouraging your child to take advantage of the tutorials, interactive activities, and other online resources listed above.

Methods of Assessment

Final exams should be cumulative in nature, emphasizing the most essential benchmarks for the course. Results of the final exam represent 20 percent of the final grade, but this single measure *may not* drop a student's grade by more than one letter grade. In courses that rely heavily on a major project, performance exhibition, etc., the project should be divided into stages or components and each of those should be graded separately, providing students with frequent and specific feedback.

Board-Approved Grading Scale

Excerpts taken from School Board Rule 6452

GRADING SCALE

A+=98-100 percent	B+=86-89 percent	C+=76-79 percent	D+=66-69 percent
A=93-97 percent	B=83-85 percent	C=73-75 percent	D=63-65 percent
A-=90-92 percent	B-=80-82 percent	C-=70-72 percent	D-=60-62 percent
			F=0-59 percent

MAKE-UP WORK

Students submitting work up to ten school days late without prior approval may receive up to two grades lower on the work than they would have received if the work had been submitted on time (i.e., B+ lowered to a D+). Student work submitted after ten school days without prior approval shall not be accepted for credit and shall be recorded with a score of zero.

Upon returning to school after an absence, a student has the responsibility within the number of days equal to the length of the absence or suspension to meet with the teacher to develop a plan for making up missed work, quizzes, and examinations. A truant student has the responsibility on the first day he or she returns to the course/class to meet with the teacher to develop a plan for making up missed work, quizzes, and examinations. Lower grades may not be given for late work due to excused absences, suspension, or truancy unless the work is submitted later than agreed upon deadlines.

See Rule 6452 in its entirety at: www.kusd.edu.