

CATALOG INFORMATION

Dept and Nbr: MATH 58

Title: PLANE TRIGONOMETRY

Full Title: Plane Trigonometry

Last Reviewed: 2/10/2020

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:
Angles of intersections of transversal with parallel lines, similar triangles, standard position angles, radians/degrees, definitions of circular functions, right triangle applications, identities, graphs of the functions, trigonometric equations, inverse functions, Laws of Sines/Cosines, vectors and applications, polar form of complex numbers, DeMoivre's Theorem, use of calculators.

Prerequisites/Corequisites:
Math 156 or qualifying placement score equivalent to high school intermediate algebra course.

Recommended Preparation:
Previous programming course/experience.

Limits on Enrollment:

Schedule of Classes Information:
Description: A complete contemporary course in trigonometry. (Grade Only)
Prerequisites/Corequisites: Math 156 or qualifying placement score equivalent to high school intermediate algebra course.
Recommended: Previous programming course/experience.

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area		Effective:	Inactive:
	B	Communication and Analytical Thinking	Fall 2006	
	B	Communication and Analytical Thinking	Fall 1981	Fall 1999
CSU GE:	MC	Math Competency		
	Transfer Area		Effective:	Inactive:
	B4	Math/Quantitative Reasoning	Fall 2006	
	B4	Math/Quantitative Reasoning	Fall 1981	Fall 1996
IGETC:	Transfer Area		Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive: Fall 1999
UC Transfer:		Effective:		Inactive:

CID:

Certificate/Major Applicable:

Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:

To be successful, students should be able to:

1. Discuss the topics listed in the Course Description, comparing and contrasting major results.
2. Appreciate the significance of this mathematics in the solution of important problems, for success in future work in mathematics, in applications to other disciplines, and as historical contribution.
3. Demonstrate competence in the skills from the topics detailed in Course Content.
4. Formulate a strategy to solve stated problems, choose and apply the appropriate skills, carry out the solution with correct units of measure, and estimate results to verify answers to the satisfaction of the responsible professional staff.

Topics and Scope:

1. Trigonometric Functions of Angles.
Definitions, special characteristics of trigonometric functions, radian and degree measure, inverse functions, arc length and area of a sector.
2. Graphical Representation of Trigonometric Functions.
Amplitude, period, horizontal and vertical shifts, graphs of fundamental trigonometric functions, general graphs and graphing

- by addition of ordinates.
3. Identities and Conditional Equations.
The eight fundamental identities, proof, sum and difference of angles and related identities, trigonometric equations and their solutions.
 4. Solutions of Triangles.
Right triangles, oblique triangles, Law of Sine, Law of Cosine, area of triangles, numerical solutions by use of calculators.
 5. Complex Numbers and Polar Coordinates.
Definitions, arithmetic of complex numbers, graphical representation, DeMoivre's Theorem, polar form of curves, definition of vectors, addition and subtraction of vectors.

Assignment:

1. The student will have daily outside reading, problem set assignments from required text(s), or instructor chosen supplementary materials.
2. Instructional methodology may include, but not limited to: lecture, demonstrations, oral recitation, discussion, supervised practice, independent study, outside project or other assignments.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Exams

Problem solving
25 - 50%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Performance exams

Skill Demonstrations
30 - 70%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice

Exams
0 - 25%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category 0 - 0%

Representative Textbooks and Materials:

Text(s) required of each student will be selected by the department, a committee of the department, or the responsible instructor from the books currently available. Choices in the past have included:

TRIGONOMETRY FOR COLLEGE STUDENTS, 4th Ed. by Karl Smith, California: Brooks/Cole, 1987.

ANALYTIC TRIGONOMETRY WITH APPLICATIONS, 4th Ed. by Raymond A. Barnett, California: Wadsworth, 1988.