

Math 1316
Plane Trigonometry
Course Syllabus



Texas State
Technical College
Marshall

COURSE SYLLABUS

Plane Trigonometry
Title

Math 1316
Number

3-0-3
Lecture - Lab - Credit

Math 1314
Prerequisite

Gregory B. McDaniel
Program Chair

07/17/08
Date

This syllabus has been reviewed and is current on the date indicated.

Reviewed By

Date

Instructor

Program Chair

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I. Course Description:

Trigonometric functions, identities, equations, and applications.

II. Course Objectives:

Upon the completion of this course, each student will be able to:

1. Solve problems involving trigonometric functions.
2. Solve problems involving acute angles and right triangles.
3. Solve problems involving radian measure and circular functions.
4. Verify fundamental trigonometric identities.
5. Solve problems involving inverse trigonometric functions..
6. Solve oblique triangles and problems involving vectors.

III. Critical/Logical Thinking Objectives

1. Solve problems involving acute angles and right triangles.
2. Solve oblique triangles and problems involving vectors.

IV. Course Outline:

Upon completion of each unit the student will:

A. Lecture

- 1.0 Introduction to Course
- 2.0 The Trigonometric Functions
 - 2.1 Solve problems involving the basic concepts of the Cartesian plane.
 - 2.2 Solve problems involving angles and the Cartesian plane.
 - 2.3 Solve problems involving angle relationships and similar triangles.
 - 2.4 Define the trigonometric functions.
 - 2.5 Use the definitions of the trigonometric functions.
- 3.0 Acute Angles and Right Triangles (**Critical Thinking**)
 - 3.1 Solve problems involving trigonometric functions of acute and non-acute angles.
 - 3.2 Find trigonometric function values using a calculator.
 - 3.3 Solve right triangles.
 - 3.4 Solve applied problems involving right triangles.
- 4.0 Radian Measure and the Circular Functions
 - 4.1 Solve problems involving radian measure.
 - 4.2 Solve problems involving circular functions.
 - 4.3 Solve problems involving linear and angular velocity.
- 5.0 Graphs of the Circular Functions
 - 5.1 Solve problems involving graphs of the sine and cosine functions
- 6.0 Trigonometric Identities
 - 6.1 Verify fundamental trigonometric identities.
- 7.0 Inverse Trigonometric Functions and Trigonometric Equations
 - 7.1 Solve problems involving inverse trigonometric functions.

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- 8.0 Applications of Trigonometry and Vectors (**Critical Thinking**)
 - 8.1 Solve triangles by using the Law of Sines.
 - 8.2 Solve triangles by using the Law of Cosines.
 - 8.3 Solve problems involving vectors.

B. Laboratory

Laboratory activities are not scheduled for this course.

V. Reference Material:

- A. Lial, Margaret L., Hornsby, E. John Jr., Schneider, David I. 2005. Trigonometry, Eighth Edition. Addison-Wesley, Reading, Massachusetts. ISBN: 0-321-22736-0

VI. Supplies:

- A. 3-Ring Binder
- B. Calculator, TI-83+
- C. Notebook Paper (200 sheets)
- D. Pencils (5)

VII. Grading Policy:

90 - 100=	A
80 - 89 =	B
70 - 79 =	C
60 - 69 =	D
< 60 =	F

VIII. CLASS PARTICIPATION POLICY

Texas State Technical College challenges students to be learners who assume responsibility for being a part of a community of scholars. Student presence and participation in the classroom is an important component of this challenge. Furthermore, as part of its mission, TSTC offers an education that prepares students for professional employment. Each student is encouraged to develop a professional work ethic that reflects responsibility, initiative, and teamwork.

Students are expected to attend all classes. Students who are absent from class miss opportunities to contribute to the learning environment of the classroom and are developing patterns that will not be tolerated in the professional workplace.

In light of the above, the student is responsible for all assigned course work and cannot be absolved of this responsibility. When enrolled in a particular course, the student is obligated to do all of the work assigned. Punctual and regular attendance is vital to the discharge of this obligation and absences, excused or not, do not alter this responsibility.

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Students whose absences exceed 15 percent of the scheduled classes and laboratories may receive an “F” for the course.

IX. Safety:

Unsafe or disruptive behavior will not be tolerated. Violations will be dealt with on an individual basis.

X. Special Needs:

If you have a condition, such as a physical or mental disability, which will make it difficult for you to carry out the work as outlined, or will require extra time on examinations, please notify me and Vanessa Hunter Davis in the first two weeks of the course so that appropriate arrangements may be made.

XI. Other:

Expected Behavior

Students are expected to:

1. Show up for class on time and expecting to stay for class until the instructor dismisses class.
2. Let the instructor know if they need to leave class for a few minutes.
3. Remain quiet during class.
4. Refrain from disturbing other students.
5. Refrain from using profanities and vulgarities during time spent in class or in the instructor’s office.
6. Refrain from using tobacco products in class.

XII. Instructor Information:

- A. **Instructor Name:** Gregory B. McDaniel
B. **Office Number:** 136 (North)
C. **Phone Number:**
1. **School:** 903-923-3426 or 888-ETC-TSTC
2. **Extension:** 3426
D. **Instructors e-mail address:** greg.mcdaniel@marshall.tstc.edu
E. **Office Hours:** as posted

XIII. SCANS Analysis for the Course:

SCANS Matrix

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Program: General Academics Degree: X Associate ___ Certificate
List Of All Identified Competencies

Competencies

1	2	3	4	5	6	7	8	Course Number	Course Title
X		X		X	X	X		Math 1316	Plane Trigonometry
								Competency References	
							8	Basic Use of Computers	
						7		Workplace Competencies	
					6			Personal Qualities	
				5				Thinking Skills	
			4					Speaking and Listening	
		3						Arithmetic or Mathematics	
	2							Writing	
1								Reading	