Prairie View A&M University

Course Title: Trigonometry
Course Prefix: Math   **Course No.:** 1123   **Section No.:** XXX   **CRN:** XXXXX

Department of Mathematics   **College of Arts and Science**

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Office Hours:	
Virtual Office Hours:	
Class Meeting Days and Times:	TBD
Catalog Description:	Trigonometry (3-0) Credit 3 semester hours. Trigonometric functions, radian measure, functions of composite angles and identities, and trigonometric equations.

Prerequisites:	Math 1113 or equivalent
Co-requisites:	NA

Required Text: Three items are required:
1. The textbook – either a paper copy or an electronic version,
2. MyMathLab – an online homework package, and
3. A scientific or graphing calculator.

Text and MyMathLab Combination Pack
Trigonometry: A Right Triangle Approach, 5th Edition; by Sullivan and Sullivan;
ISBN: 978-0-3-2157453-4, Pearson/Prentice Hall, 2009

Text only – paper copy
Trigonometry: A Right Triangle Approach, 5th Edition; by Sullivan and Sullivan;
ISBN: 978-0-1-3602896-3, Pearson/Prentice Hall, 2009

MyMathLab access only
MyMathLab access can be purchased at a bookstore or online at http://www.MyMathLab.com
MyMathLab Online Course for Trigonometry: A Right Triangle Approach, 5th Edition; by
Sullivan. ISBN: 978-0-1-3604570-0, Pearson/Prentice Hall, 2009

Text only – online or electronic download
The text can be purchased for online access or for electronic download with 180 day access at
CourseSmart http://www.coursesmart.com
ISBN: 978-0-13-602896-3 or 978-0-13-502467-6

Calculator
A scientific calculator is required. A graphing calculator is recommended: e.g. TI 83, 84 or 86
series. Calculators capable of symbolic manipulation will not be allowed on tests. Examples
include, but are not limited to, TI 89, 92, and Nspire CAS models and HP 48 models. Neither
cell phones nor PDA's can be used as calculators. Calculators may be cleared before tests.

Recommended Text/Readings: None additional

Access to Learning   PVAMU Library:

Course Goals:

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

	Goal	Alignment with Academic Program	Alignment with Core Curriculum
1.	Graph trigonometric functions of the form: $y = A \sin(Bx + C)$, $y = A \cos(Bx + C)$, $y = \tan(Bx + C)$, $y = \cot(Bx + C)$, $y = A \sec(Bx)$, and $y = A \csc(Bx)$.	X	
2.	Develop logical reasoning abilities via proving trigonometric identities and solving trigonometric equations.	X	
3.	Solve problems requiring the applications of certain phenomena: e.g. sound, light, electricity, and motion.	X	X
4.	Solve triangles when given 3 components.	X	
5.	Develop formulas for finding the area of a triangle.		
6.	Represent relationships among ordered pairs of numbers, geometric vectors, and polar and trigonometric forms.	X	
7.	Graph and evaluate complex expressions of the form $a + bi$.	X	
8.	Recognize or classify trigonometric functions as even, odd, or neither; define symmetry relative to a specified point or line, analyze periodicity, determine intervals where increasing or decreasing.	X	
9.	Graph trigonometric relations, trigonometric functions, and their inverses.	X	
10.	Evaluate trigonometric expressions or functions for special angles as well as those requiring use of a calculator or trigonometric tables.	X	
11.	Convert between equivalent expressions: functions and co-functions, relation and inverse relation, algebraic and polar forms of complex numbers, radians and degrees, and half angle and double angle.	X	
12.	Simplify trigonometric expressions and perform basic operations on complex numbers and trigonometric functions.	X	
13.	Find arc length, angular speed, and linear velocity.	X	
14.	Complete a project utilizing and exploring technology.	X	X

Course Outcomes / Objectives

Assessment will measure conceptual and relational knowledge of key concepts and procedures, ability to communicate mathematically, and to do problem-solving.

Course Requirements and Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Examinations – written tests designed to measure knowledge of presented course material
Quizzes – pop quizzes will be given from time to time unannounced ahead of time.
Homework – to be done using MyMathLab to enhance the understanding of the material.

Grading Matrix

Instrument	Unit Value	Total
MyMathLab code for Homework	odion42538	15%
Quizzes		15%
Exam 1		15%
Mid Term Examination		15%
Exam 3		15%
Final Examination		25%
Total:		**100%**

Grade Determination:
A = 90 – 100%;
B = 80 – 89%;
C = 70 – 79%;
D = 60 – 69%;
F = 0 – 59%

Course Procedures

The use of cell phones in this class is absolutely prohibited.

Submission of Assignments:
No assigned work will be accepted after the due date.

Formatting Documents:
Microsoft Word is the standard word processing tool used at PVAMU. If you are using other word processors, be sure to use the "save as" tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.
Examination Policy
Examinations should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook).

Professional Organizations and Journals
NA

References
NA

CALENDAR
Math 1123 – Trigonometry

Tentative Course Outline

Week	Begin Date	Textbook Content Objectives	Assignments, Exams, and Notices
1		Introductions; Course and Syllabus Discussion	
		Math Department Pretest	**Pre-Test,**
		Brief review of Algebra, Appendices A1-A4, A6-A9	Algebra Skills Evaluation
		Chapter 1. Graphs and Functions	
		Sections 1.1 - 1.8	
2		Chapter 2. Trigonometric Functions	**OLHW1**
		2.1 Angles and Their Measure	**Quiz#1**,
		General Student Assembly	
		2.2 Right Triangle Trigonometry	
3		2.3 Evaluating Trigonometric Functions of Acute Angles	**OLHW2**
		Last day to drop a course without a transcript record	Census Date:
		2.4 Evaluating Trigonometric Functions of General Angles	**Test #1,**
		2.5 Unit Circle; Properties of the Trigonometric Functions	
4		2.6 Graphs of the Sine and Cosine Functions	**OLHW3**
		2.7 Graphs of Tangent, Cotangent, Cosecant, Secant Functions	
		2.8 Phase Shift (Remainder of section is optional.)	
5		Review of Chapter 2 in preparation for Test 1	Chapter 2 Review Exercises
		Test 1 over topics covered in Chapter 2	**Test #2,**
6		Chapter 3. Analytic Trigonometry	**OLHW4**
		3.1 The Inverse Sine, Cosine, and Tangent Functions	**Quiz#2,**
		3.2 The Inverse Trigonometric Functions (Continued)	
		3.3 Trigonometric Identities	
7		3.3 Trigonometric Identities (continued)	**OLHW5**
		3.4 Sum and Difference Formulas	**Test #3,**
		3.5 Double-angle and Half-angle Formulas	
8		3.6 Product-to-Sum and Sum-to-Product Formulas	
		Comprehensive Review for Midterm Examination; Project Due	
		Midterm Examination covering Sections 2.1-3.3	**Midterm Exam,**
9		3.7 Trigonometric Equations (I)	**OLHW6**
		3.8 Trigonometric Equations (II)	
10		Chapter 4. Applications of Trigonometric Functions	**OLHW7**
		4.1 Applications Involving Right Triangles	**Quiz#3,**
		4.2 The Law of Sines	
11		Last day to drop and receive a "W"	
		4.3 The Law of Cosines	**OLHW8**
		4.4 Area of a Triangle	

		Review of Chapters 3 and 4 in preparation for Test 3	Chapter Review Exercises
12		Test 3 over topics covered in Chapters 3 and 4	**Test # 3**,
		Chapter 5 Polar Coordinates; Vectors	**OLHW9**
		5.1 Polar Coordinates	
		5.2 Polar Equations and Graphs	
13		5.3 The Complex Plane; DeMoivre's Theorem	
		5.4 Vectors	**Post-test**,
14		5.4 Vectors (continued)	**ONHW10; Quiz#4**,
		5.5 The Dot Product	
		Review of Chapter 5	
15		Course Review;	
		Comprehensive Final Examination	Final Exam, ____
16		Finals Period	
This schedule may be updated if necessary as the semester progresses.			

University Rules and Procedures

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):
You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:
1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. Fabrication: use of invented information or falsified research.

4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such

disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Technical Considerations for Online and Web-Assist Courses

Minimum Hardware and Software Requirements:
- Pentium with Windows XP or PowerMac with OS 9
- 56K modem or network access
- Internet provider with SLIP or PPP
- 8X or greater CD-ROM
- 64MB RAM
- Hard drive with 40MB available space
- 15" monitor, 800x600, color or 16 bit
- Sound card w/speakers
- Microphone and recording software
- Keyboard & mouse
- Netscape Communicator ver. 4.61 or Microsoft Internet Explorer ver. 5.0 /plug-ins

Participants should have a basic proficiency of the following computer skills:
- Sending and receiving email
- A working knowledge of the Internet
- Proficiency in Microsoft Word
- Proficiency in the Acrobat PDF Reader
- Basic knowledge of Windows or Mac O.S.

Netiquette (online etiquette): Students are expected to participate in all discussions and virtual classroom chats when directed to do so. Students are to be respectful and courteous to others in the discussions. Foul or abusive language will not be tolerated. When referring to information from books, websites or articles, please use APA standards to reference sources.

Technical Support: Students should call the Prairie View A&M University Helpdesk at 936-261-2525 for technical issues with accessing your online course. The helpdesk is available 24 hours a day/7 days a week. For other technical questions regarding your online course, call the Office of Distance Learning at 936-261-3290 or 936-261-3282.

Communication Expectations and Standards:
All emails or discussion postings will receive a response from the instructor within 48 hours.

You can send email anytime that is convenient to you, but I check my email messages continuously during the day throughout the work-week (Monday through Friday). I will respond to email messages during the work-week

by the close of business (5:00 pm) on the day following *__my receipt__* of them. Emails that I receive on Friday will be responded to by the close of business on the following Monday.

Submission of Assignments:
Assignments, Papers, Exercises, and Projects will distributed and submitted through your online course. Directions for accessing your online course will be provided. Additional assistance can be obtained from the Office of Distance Learning.

Discussion Requirement:
Because this is an online course, there will be no required face to face meetings on campus. However, we will participate in conversations about the readings, lectures, materials, and other aspects of the course in a true seminar fashion. We will accomplish this by use of the discussion board.

Students are required to log-on to the course website often to participate in discussion. It is strongly advised that you check the discussion area daily to keep abreast of discussions. When a topic is posted, everyone is required to participate. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.