

# MATH 1321: Trigonometry Spring 2011

## Course Information

Section Number(s): 014  
Meeting Time: TR 8:00am - 9:20am  
Meeting Room: Math 017

## Instructor Information

Instructor : Josh Engwer  
Office: Math 221  
Office Hours: TR 10:00am - 1:00pm  
Email: [josh.engwer@ttu.edu](mailto:josh.engwer@ttu.edu)  
Web: <http://www.myweb.ttu.edu/jengwer>

## Course Materials

Textbook (required): *Trigonometry* (9th Edition) by Lial with MyMathLab, ISBN: 9780321536006  
Calculator (required): Scientific (**Graphing calculators not permitted on quizzes/exams**).

\*NOTE: Make sure your textbook is packaged with the [MyMathLab Student Access Kit](#).

## Prerequisites

- \* Grade of C or better in MATH 1320 or 1420, or
- \* 4+ on MPE, 610+ on SATM, or 26+ on ACTM

## About the Course

The purpose of this course is to prepare students to take Precalculus or Calculus as well as to prepare students for future courses within their chosen major, such as, but not limited to, Pre-Physical Therapy, Pre-Occupational Therapy, Pre-Dental, Interior Design and Construction Technology. From this course, students should acquire the skills and concepts necessary for success. Although a scientific is required, it will not be a central feature of this course; we will use them to aid understanding after you have mastered the concepts.

## Student Learning Outcomes

Math 1321 satisfies the university core curriculum requirement in Mathematics: "Students graduating from Texas Tech University should be able to demonstrate the ability to apply quantitative and logical skills to solve problems." It meets the TTU general education student learning outcomes for mathematics that students will:

- \* Apply arithmetic, algebraic, geometric, statistical and logical reasoning to solve problems.
- \* Represent and evaluate basic mathematical and/or logical information numerically, graphically, and symbolically.
- \* Interpret mathematical and/or logical models such as formulas, graphs, tables and schematics, and draw inference from them.

Students obtain those trigonometry skills needed for subsequent studies in pre-calculus and calculus. In particular the students will:

- \* interpret information given by graphs including intercepts, domain, and range
- \* understand and use the definitions of trigonometric functions and the unit circle
- \* graph trigonometric functions with understanding of amplitude, period, translations, and scalings
- \* understand and verify trigonometric identities, and solve trigonometric equations
- \* model real world situations right angle trigonometry, law of sines and cosines
- \* understand vectors, vector operations, the dot product, and complex numbers
- \* understand when to use certain rules, properties, theorems, and formulas in the above learning outcomes
- \* use technology appropriately and integrate appropriate terminology into your everyday language when discussing mathematics
- \* appraise your own progress in thinking logically, increasing your mathematical confidence, and appropriate organizational skills for mathematics

## Course Outline & Calendar (number of days per chapter & exam dates may vary)

Chapter 1 (The Trigonometric Functions) .....	2 days
Chapter 2 (Acute Angles and Right Triangles) .....	3 days
Chapter 3 (Radian Measure and Circular Functions) .....	3 days
EXAM 1 (2/10)	
Chapter 4 (Graphs of the Circular Functions) .....	3 days
Chapter 5 (Trigonometric Identities) .....	4 days
EXAM 2 (3/10)	
----- LAST DAY TO WITHDRAW FROM COURSE (3/23) -----	
Chapter 6 (Inverse Trig. Functions and Trig. Equations) .....	4 days
Chapter 7 (Trig. Applications and Vectors) .....	5 days
EXAM 3 (4/21)	
Chapter 8 (Complex Numbers) [omit 8.4] .....	3 days
DEPARTMENTAL FINAL EXAM (5/6) from 10:30am - 1:00pm	
Total Lecture days.....	27 days
Total class days (including exams & final).....	31 days

## Grading

Homework --	10%
Quizzes --	10%
Exam 1 --	20%
Exam 2 --	20%
Exam 3 --	15%
Final --	25%

## Scaling

A --	90 - 100%
B --	80 - 89%
C --	70 - 79%
D --	60 - 69%
F --	0 - 59%

## Homework

Homework will be assigned through MyMathLab on Thursdays, generally due in one week's time. Students are encouraged to print out the problems and work them off-line. The answer of any problem can be attempted 3 times, and each incorrect problem can be replaced up to 10 times. MyMathLab has many aids (Videos, E-Book, Help Me Solve This, ...) that can be of help on a tough HW problem. **Once the due time is passed, the assignment will be closed without any extensions.**

## Quizzes

10-minute quizzes will be given at the beginning of Thursday lectures not scheduled for an exam. The lowest three quizzes will be dropped.

## Midterm Exams

Three midterm exams will be administered on the following days:

- Exam 1 -- February 10th (Thurs.) -- Covers chapters 1-3
- Exam 2 -- March 10th (Thurs.) -- Covers chapters 4 & 5

Use of a 4x6 "formula card" (front and back) will be permitted.

## Final Exam

The final exam is a comprehensive common departmental final covering Chapters 1-8. It will be administered on **Friday, May 6th, 10:30AM - 1:00PM**. No notes of any form will be allowed on the final exam nor will any "formula sheet" be provided. A calculator may be permitted on a portion of the final exam.

## Calculators

Scientific calculators are expected to be used as a teaching/learning tool. Some sections of the text book require the use of a scientific calculator that can perform trigonometric calculations. They will be permitted on select quizzes and all tests including the final exam to some extent. However, appropriate work on quizzes and exams must still be shown. **Only scientific calculators are allowed on select quizzes and exams (graphing or CAS-capable calculators not allowed).** Web-enabled or mobile communication devices like mobile phones/smart phones/tablet devices/mp3 players will not be allowed to use as calculators. Sharing of calculators during exams is not allowed. **Some answers may be needed be expressed in exact form in terms of radicals and multiples of pi, and this will be stated as 'Find/Solve EXACTLY' in the question.** Also, be sure to know: 1) how to change between 'degree' and 'radian' mode, 2) how to enter angle measures in degrees/minutes/seconds form, 3) how to enter trigonometric functions and their inverses.

## Tutoring Services

Free tutoring is available at the T.S.C (Tutoring & Study Center) in the MATH building (Room 106). Also, there is free tutoring at the P.A.S.S. Learning Center in Holden Hall (Room 80). Check the course website for links to the hours of operation.

## Make-ups

No make-up quizzes or tests are given without proper documentation and prior written notification. If you know you are going to be out in advance, please let the instructor know so arrangements can be made to take the quiz or test early.

## Important Dates

March 12 - March 20 -- Spring Break (no class)

March 23 (Mon.) -- Last day to withdraw from class

May 6th (Fri.) -- Final Exam from 10:30 am - 1:00 pm

## Withdrawal from class

If you choose to withdraw from the class or declare pass/fail intentions, please note the deadline is March 23rd. It is encouraged to talk to your instructor before withdrawing from the class. However, it is the responsibility of the student to withdraw through the Registrar's Office and cannot be done by the instructor.

## Withdrawal from the University

Thursday, April 28th is the last day to withdraw from the university.

## Attendance Policy

Attendance will not be taken, but your attendance is expected. Announcements may be made in class regarding tests or assignments, and you are responsible for all information given in class. Makeup exams will only be given for valid excuses with proper documentation. Please let the instructor know in advance if you will be missing an exam for any reason.

## Academic Integrity

"It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and a high standard of integrity. The attempt of students to present as their own any work that they have not honestly performed is regarded by the faculty and administration as a serious offense and renders the offenders liable to serious consequences, possibly suspension."

## Civility in the Classroom

Students are expected to help create a classroom environment conducive to learning. This includes muting or setting on 'vibrate mode' mobile devices (e.g. mobile phones, tablets, laptops), not talking among yourselves, etc. Refer to the *Code of Student Conduct*, available in the *Student Affairs Handbook*. Violations of the *Code of Student Conduct* may result in serious sanctions such as suspension or expulsion.

## ADA Accommodation

Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office at 335 West Hall or 806-742-2504.

## Religious Holy Day observance

A student who intends to observe a religious holy day causing time conflicts with class activities should notify the instructor prior to the absence. A student who is absent from class for the observance of a religious holy day shall be allowed to take an examination or complete a quiz scheduled for that day within a reasonable time after the absence. A student may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.