MATH 1316 – Fall 2016

Trigonometry

1306.001 MWF 900-950
1306.002 MWF 1000-1050

Instructor: Dr. Julie Sutton
Office: FN 2.208
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Office Hours: MWF 11-1150 and by appointment.

Course Pre-requisites, Co-requisites, and/or Other Restrictions:
A score of 35% on ALEKS Math Placement Test, a grade of at least C-, or concurrent enrollment in MATH 1314.

Course Description:
Trigonometry is a field of mathematics in which the geometric properties of the Unit Circle as well as the angles and edges of triangles are used to measure lengths. Real-world problems involving trigonometry are common in engineering, physics, construction, and design.

Intermediate Algebra skills are assumed for those enrolled in MATH 1316.

MATH 1316 cannot be used to satisfy major requirements for majors in the and Mathematics, Management, or for the School of Engineering and Computer Science.

Main topics to be covered (Chapter.Section):

1. Review of College Algebra (Selected portions of Chapter P)
2. Right Triangle and Unit Circle Trigonometry (1.1-1.4)
3. Radian and Degree Measure (1.1)
4. Graphs of the Trigonometric Functions (1.5)
5. Inverse Trigonometric Functions (1.7)
6. Fundamental Identities of Trigonometry (2.1-2.2)
7. Solving Trigonometric Equations and Using Formulas (2.3-2.5)
8. Laws of Sines and Cosines, Vectors and Dot Products (Chapter 3)
9. Complex numbers (Chapter 4)

Student Learning Outcomes/Objectives:

1. Students will master techniques of computing with trigonometric functions and their inverses.
2. Students will develop an understanding of how models of real-world situations are constructed using trigonometric functions.
3. Students will gain familiarity with the algebraic expertise necessary to derive and validate trigonometric identities.

Academic Calendar:

First Day Of Class	Monday, January 11
MLK Day	Monday, January 18
Census Day	Wednesday, January 27
Exam I	**Friday, February 12**
Mid-Term Grades	Saturday, March 5
Exam II	**Friday, March 11**
Spring Break	March 14-18
Drop Date	Monday, March 28
Exam III	**Wednesday, April 13**
Exam IV/Last Day of Class	**Friday, April 29**

Required Materials:
Access to WebAssign. *Trigonometry,* (9th ed.) by Larson

You should bring the following to lecture:

- Non-programmable Calculator (TI-30X)
- Lecture Notes
- Scratch Paper

You will be working on problems during lecture, so please be on-time.

Textbook: *Trigonometry, 9th ed*, Larson
ISBN: 13:978-1-133-95441-6

Optional Materials:

- Graph Paper
- Ruler
- Colored Pencils
- Student Solution manual for the text (odd problems only)

Grading Scale:

$97 \leq x \leq 100$	A+
$93 \leq x < 97$	A
$90 \leq x < 93$	A-
$87 \leq x < 90$	B+
$83 \leq x < 87$	B
$80 \leq x < 83$	B-
$77 \leq x < 80$	C+
$73 \leq x < 77$	C
$70 \leq x < 73$	C-
$67 \leq x < 70$	D+
$63 \leq x < 67$	D
$60 \leq x < 63$	D-
$60 < x$	F

Grading Policy:

Type	Number	% of Final Grade
Exams	3	75%
Quizzes	5-9*	10%
Homework	TBD	15%
	Total:	100%

*One (1) quiz grade will be dropped.

If at any time you have questions, please do not hesitate to ask.

Assignment Descriptions:

Exams: There will be three (3) cumulative exams. All exams will be held during class time and all exams will be closed note. Non-programmable, scientific calculators will be allowed, but no other electronic devices (including cell phones) will be allowed during exams. Your lowest exam score will be weighted 20% of your grade and the highest will be weighted 30%. The remaining exam will be weighted 25% each. No exam grades will be dropped. The tentative dates for exams can be found in the table on page 1.
*Students may ask for a re-grade of a quiz or exam when they feel it is warranted. This should be done in writing, with your reason for requesting the re-grade written on a blank sheet of paper and stapled to the front of the original assignment to be re-graded. Re-grading requests must be submitted no later than one week from the day the assignment was returned in class. If you submit a quiz or exam for a re-grade be aware that your entire assignment may be re-graded.

You should refrain from writing on your exam (or quiz) after it is returned to you as this may invalidate any claims you have for a re-grade.

Quizzes: Occasionally there will be a 10-15 minute quiz administered in class (or, possibly in the testing center). This will be announced at least one class period prior to the quiz.
You will be allowed one (1) handwritten (by you) 8 ½ " x 11" sheet of notes for use during each quiz. You may not borrow notes from other students, and your notes may not be a photocopy of pages from your book or contain copied images. Non-programmable, scientific calculators may be allowed on some quizzes, but not for all of them and you may not use a cell phone (or other electronic device) as a calculator during quizzes. Your one (1) lowest quiz grade will be dropped.

Homework: Homework will be assigned through the online portal WebAssign. You will be given at least one (1) week to complete any online homework assignments.

eLearning and WebAssign: In this course, we will be using the UTDallas online portal, eLearning (http://elearning.utdallas.edu). You should select your section of MATH 1316 from the list of courses in which you are enrolled. Here you will see a link to WebAssign. You MUST use this link to access WebAssign or you risk doing work that will not be saved as part of this course (and, thus, will not be graded).

The first time you click on this link you will be asked to enter an access code. If you purchased the textbook new you will find an access code with the book. If you purchased it used you should try the access code in case it was not used previously. If your access code does not work, you will need to purchase one within WebAssign.

If you are asked to enter a Class Key, you need to contact technical support for eLearning (email: assist@utdallas.edu or 972-883-2911)

Common WebAssign Issues:
If you follow the class link for WebAssign and are asked for a class Key instead of an Access Code, try the following:

1. Try using Google Chrome or Firefox. Internet Explorer (does anyone use that?!?!) and Safari are known to have compatibility issues with the WebAssign interface.
2. Clear your browser's history and cookies.
3. If you receive other errors you need to contact WebAssign Technical Support (800.955.8275)

Course and Instructor Policies:

Make-up Quizzes: Since one quiz grade is dropped, make-up quizzes will, in general, not be given unless there is an accommodation approved at least one week in advance.

Calculators: Only non-programmable, scientific calculators (TI-30X is suggested) are permitted on exams or quizzes (when allowed). Your calculator should have the ability to calculate probabilities (permutations, combinations, factorials, etc.) You may not share a calculator with another student. Cell phones (or other electronic devices) may **not** be used on exams or quizzes.

Attendance: You are allowed 3 absences in this course with no penalty; you do not need to email me, provide a doctor's note, or other such documentation. Upon missing the fourth class your grade will be lowered one "notch." For example, a student who misses four (4) class meetings and earns a C+ in the course will have her grade lowered to a C for the absences. There will be no "excused" absences unless they are for University travel or for religious reasons. In these cases, documentation must be submitted and approval given at least one week prior to the absence. Two tardies (>10 minutes) will equal one absence. If you have a medical diagnosis that requires you to routinely miss class please contact Dr. Sutton within the first two (2) weeks of class to discuss your situation. In the event of severe illness (requiring hospitalization) please contact Dr. Sutton within 2 business days of discharge to make arrangements.

E-Mail Correspondence: When emailing Dr. Sutton, you must use your official UTDallas email account; email originating from another account (such as gmail) will not be acknowledged in accordance to UTDallas policies. Please include the following in the subject of your email: Course number and section, a basic overview of your purpose for emailing. For example:

MATH 1306.001 MyMathLab Problem #24, Section 3.4

In the body of your email include all information necessary to address your concern. If you are emailing for help with a homework problem from WebAssign, please attach screenshots as necessary.

Comet Creed:

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

UT Dallas Syllabus Policies and Procedures:

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to http://go.utdallas.edu/syllabus-policies for these policies.

My pledge to you, my student:

The goals of this course can only be accomplished in a setting of mutual respect. Although the study of mathematics rarely lends itself to too much controversy, we must still provide a safe environment that is conducive to learning. All are welcomed and encouraged to actively participate in the learning of College Algebra, regardless of gender, race, nationality, native language, sexual orientation, gender identity, political ideology, and especially personal mathematics history. I look forward to getting to know each of you both as individuals and as a learning community.

Tentative Course Schedule			
Week #	Dates	Topics	Sections
1	Aug 24, 26	Solving quadratic equations, functions and function notation, transformations of functions	P2, P5
2	Aug 29, 31	Transformations of functions (continued),	P8, P9
3	Sept 2, 7, 9	Combinations of functions, inverse functions.	P8, P9, P10
4	Sept 12, 14, 16	The Unit Circle, Radians	1.2, 1.1
5	Sept 19, 20	Radians and degrees	1.1
	Friday, Sept 23	**Exam I**	
6	Sept 26, 28, 30	Sine and Cosine as continuous functions	1.5, 1.6
7	October 3, 5, 7	Right Triangles, Trigonometric functions of any angle	1.3, 1.4
8	Oct 10, 12, 14	Inverse Trigonometric Functions,	1.7, 2.1, 2.2
9	Oct 17, 19, 21	Fundamental Identities	2.2
10	Oct 24, 26, 28	Solving Trigonometric Equations, Sum/Difference Formulas	2.3, 2.4
11	Oct 31, Nov 2	Multiple Angle (and other) Formulas	2.5
	Friday, November 4	**Exam II**	**Up to 2.4**
12	Nov 7, 9, 11	Law of Sines, Law of Cosines	3.1, 3.2
13	Nov 14, 16	Vectors in the Plane and Dot Products	3.3, 3.4
	Friday, Nov 18	NO CLASS	
14	November 21-26	Thanksgiving Break	
15	Nov 28, 30, Dec 2	Real-World Applications	
16	December 5	Review	
	Wednesday, Dec 7	**Exam III**	

These descriptions and timelines are subject to change at the discretion of the Professor.

If at any time you have questions, please do not hesitate to ask.