Math 1303 – Trigonometry – Section 001

Course Instructor

Zicong Zhou

zicong.zhou@uta.edu

Office: 430 PKH

Office Phone: 817-272-3261

Office Hours: MW 2-3:00, PKH 430

Class Days/Times: MWF 9-9:50am, PKH 102

Textbook and Materials (Required)

1. *Trigonometry* (3rd Edition), 2012, Young, Wiley, ISBN #978-0-470-64802-5
2. Scientific Calculator
3. ScanTron Form # 882-E (Needed in every test and the final exam)

Course Prerequisites:

MAT (Math Aptitude Test) score of 11 or above. See http://www.uta.edu/math/pages/main/mpt.htm for test details.

Course Content:

Trigonometric functions, radian measure, solution of triangles, graphs of trigonometric functions, trigonometric identities and equations, and complex numbers.

Learning Outcomes:

Upon completion of Math 1303, students will:

- Understand and convert degree and radian measure
- Learn the conditions that make two triangles similar.
- Define the six trigonometric functions as ratios of lengths of the sides of right triangles.
- Evaluate trigonometric functions.
- Solve right triangles.
- Sketch angles in the Cartesian plane.
- Define trigonometric functions as ratios of x- and y-coordinates and distances in the Cartesian lane.
- Evaluate trigonometric functions for nonactute angles.
- Apply basic trigonometric identities.
- Know and use the unit circle.
- Graph basic sine and cosine functions and then translate.
- Graph tangent, cotangent, secant, and cosecant functions.
- Verify a trigonometric identity.
- Apply the sum and difference identities.
- Apply the double-angle and half-angle identities.
- Find the domain and range of inverse trigonometric functions.

- Solve trigonometric equations using algebraic techniques, inverse functions, and trig identities.
- Solve oblique triangles using the Law of Sines and the Law of Cosines.
- Find areas of oblique triangles.

Grade Calculation

Tests, Exam	Percent of Grade
Quizzes (Average of 4 Quizzes)	20%
Chapter Tests (Average of 3 Tests)	50%
Comprehensive Final Exam	30%
Total:	100%

Grading Scale

Grades will be computed based on the following distribution. Grades are rounded up accordingly.

90 — 100%	**A**
80 — 89%	B
70 — 79%	C
60 — 69%	D
Below 60%	F

Homework

- **Homework will not be graded. However, practicing problems is the best way to learn the concepts and skills**

Quizzes

- There will be 4 quizzes throughout the semester

Tests

- There will be three regular tests throughout the semester.
- The average of these tests will account for 60% of your final grade.
- No makeup tests will be given, unless approved by instructor. If you have a school sponsored away-event, religious, work, or military conflict with the tests, you must provide me with sufficient documentation of your conflict no later than one week **BEFORE** the testing date.

Final Exam

- The final exam is departmental, i.e., all sections of Math 1303 will take the same exam and the grades will have the same weight in each section.
- The final exam is comprehensive.
- Makeup exam is allowed **ONLY** with the consent of instructor (apply rule #3 on Tests)
- **Any student who fail to attend to the final exam without schedule a make-up exam will receive a grade of "F" for the course.**

Attendance Policy

- As the instructor of this section, I will **NOT** take attendance.

- Poor attendance usually results in lower grades, so students who do not attend class are not successful.

Drop Policy:

If you withdraw from the course for any reason, you must follow University procedures. It is your responsibility to execute these procedures correctly and within the deadlines. **Instructors are unable to drop students**. The Math Department Office can help with the withdrawal process. We strongly recommend that you drop the course if you are significantly behind in completing the required assignments. Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao).

Accommodations and Americans with Disabilities Act:

The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX:

The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity:

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. This course includes a zero tolerance policy for academic dishonesty and students are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. **Students found guilty of cheating will receive a grade of "F" for the course.**

> *"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)*

Student Support Services:

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Electronic Communication:

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey:

At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week:

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures:

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

Emergency Phone Numbers:

In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. We further recommend that you enter the UTA Police Department's emergency phone number into your own mobile phone. For non-emergencies, contact the UTA PD at 817-272-3381.

Student Intellectual Property Rights Statement:

A student shall retain all rights to work created as part of instruction or using university technology resources.

Schedule:

8/25	1.1 Angles, Degrees and Triangles
8/28	1.2 Similar Triangles
8/30	1.3 Def_1 of Trig Functions: Right Triangle Ratios
9/1	1.4 Evaluating Trig Functions
9/4 **(Labor day)**	No meeting
9/6	1.4 Evaluating Trig Functions
9/8	1.5 Solving Right Triangles
9/11 (**Census Day**)	2.1 Angles in the Cartesian Plane
9/13	2.2 Def_2 of Trig functions: The Cartesian Plane
9/15	2.3 Evaluating Trig Functions for Nonacute Angles
9/18	2.3 Evaluating Trig Functions for Nonacute Angles
9/20	2.4 Basic Trig Identities
9/22	Review (Chap 1 and 2)
9/25	**Test-1**
9/27	3.1 Radian Measure
9/29	3.1 Radian Measure
10/2	3.2 Arc Length and Area of a Circle Sector
10/4	3.4 Def_3 of Trig Functions: Unit Circle Approach
10/6	4.1 Basic graphs of Sine and Cosine Functions
10/9	4.1 Basic graphs of Sine and Cosine Functions
10/11	4.2 Translations of Sine and Cosine Functions
10/13	4.3 Graphs of Tangent, Cotangent, Secant and Cosecant
10/18	Review (Chap 3 and 4)
10/20	**Test-2**
10/23	5.1 Trig Identities
10/25	5.1 Trig Identities
10/27	5.2 Sum and Difference Identities
10/30	5.3 Double-Angle Identities
11/1 (**Last Day to drop**)	5.4 Half-Angle Identities
11/3	6.1 Inverse Trig Functions
11/6	6.1 Inverse Trig Functions

11/8	6.2 Solving Trig Eqs with Only One Trig function
11/10	6.3 Solving Trig Eqs with Multiple Trig functions
11/13	Review (Chap 5 and 6)
11/15	**Test-3**
11/17	7.1 Oblique Triangles and the Law of Sines
11/18	7.2 The Law of Cosines
11/20	7.3 The Area of Triangles
11/22	8.1 Complex Number
11/24 (**Thanksgiving 11/23 - 24**)	No meeting
11/27	8.2 Polar Form of Complex Number
11/29	8.4 Polar Equations and Graphs
12/1	Review (Chap 7 and 8)
12/4	Review (Overall 1)
12/6	Review (Overall 2)
12/9	**Final Exam** (Departmental)