Lamar University

Department of Mathematics

MATH 1316-48F Trigonometry (3 hour course)
Fall 2017 Syllabus
Online

Instructor:	Brian Gillespie
Office:	Lucas 111
Phone:	409-880-2210 (only available during office hours)
Office Hours:	Monday-Thursday: Online Via BlackBoard Course Mail Only Fridays: 10:00am-12:00 pm *Subject to Change
Text:	Trigonometry, 4th ed., Dugopolski, Required Pearson MyMathLab: Course Code on Blackboard Blackboard – Announcements and Lesson Information
Prerequisites:	MRS 750 or C or better in MATH 1314 or 1414 or equivalent preparation

NOTICE: This Online Course will use Pearson's MyMathLab. Please note that your instructor does not work for Pearson, and cannot fix any technical issues that occur with the MyMathLab website. If you encounter a problem on MyMathLab, contact Pearson support (http://www.pearsonmylabandmastering.com/northamerica/students/support/index.html).

Catalog Description: Study of trigonometric functions, graphs, identities, inverse trigonometric functions, trigonometric equations, and applications of trigonometry. Recommended for students who have not had high school trigonometry. Prepares for: MATH 2310, 3313

MATH 1316 Learning Outcomes: Upon completion of the course, students will:

1. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians;
2. Graph trigonometric functions and their transformations;
3. Prove trigonometric identities;
4. Solve trigonometric equations;
5. Solve right and oblique triangles;
6. Use the concepts of trigonometry to solve applications;
7. Plot points and graph equations in the Polar Coordinate system;
8. Use basic operations for vectors in planes;
9. Relate the polar form for complex numbers to vectors.

Core Curriculum Outcomes: Upon completion of this course, the student will demonstrate his or her abilities to think critically, communicate quantitative information, and apply mathematical concepts:
1. Critical Thinking: Develop a logical, consistent plan to solve a problem, recognize consequences of the solution, and articulate a reason for choosing solution method.
2. Communication Skills: Use and present quantitative information in connection with an argument or problem solution and explicate it in an effective format.
3. Empirical and Quantitative: Construct and present a detailed problem statement with evidence of relevant contextual factors and possible approaches for solving the problem, then implement a solution and review the results.

Student planning to certify to teach grades EC-4 or 4-8, content standard skills covered in this course are: 1.6, 1.7, 1.13, 1.15, 1.18, 1.18, 2.3, 2.4, 2.5, 2.6, 2.8, 2.10, 2.11, 2.12, 2.14, 3.1, 3.3, 3.4, 3.5, 3.7, 3.10, 3.14, 5.9, 5.17, 5.18

Lectures/Discussions: This is an online course, which requires MyMathLab. Students must sign up for the course at http://www.pearsonmylabandmastering.com. Students will need the course code, **which will be provided at the beginning of the semester on Blackboard**, to register for the course. They will also need to purchase an access code. This code comes with new copies of the class textbook. However, students may purchase an access code on the MyMathLab website. Please note that registration for MyMathLab will not be available until the beginning of the semester.

Two lessons will be assigned each week on Monday. Every lesson will have a homework assignment and a quiz. Lesson 1 of each week will be due on Friday. Lesson 2 of each week will be due on Friday. MyMathLab will be set to close any assignment at 11:30 PM (Central Time Zone) on the due date. Note: only one lesson will be assigned on week five and week ten.

There will be three tests, one during week five, one during week ten, and one during week fifteen. The first two tests will be available on the Friday of the stated weeks, while the third test will be available on Monday of week fifteen. MyMathLab will be set to close each test at 11:30 PM (Central Time Zone) on the due date. NOTE: No work is automatically submitted for grading. The student must click the submission button before 11:30 PM (Central Time Zone) on the due date. **There will be no exceptions allowed on due dates. Extensions will not be granted for any reason once a homework assignment or test is closed.**

Contacting the Instructor: All communications will be done through the "Course Mail" section on the course's BlackBoard page. Any message sent through this method will reach the instructor, and inform him which class the message is from. E-mails are not preferred, as they tend to not reach the instructor in a timely manner.

Grading Policies: The final grade will be computed by two tests (20% each), lesson quizzes (20%), homework (20%), and the final exam (20%). Late work will not be allowed. The final grade will be based on the following scale: 90% A, 80% B, 70% C, 60% D, below 60% F.

A grade of INCOMPLETE may be granted in the case of a documented medical emergency, within the last four weeks of the semester and only if the student is passing. If an INCOMPLETE is granted, the student will be required to provide a written plan for completion of the course.

Attendance Policy: Attendance will not be taken for this course. This class will not meet on campus. All students are expected to enroll on MyMathLab no later than the second week of class. Students should check Blackboard at least 3 times each week for any announcements.

Final Exam: The final exam, which covers material from weeks 2-14, is optional for anyone who has a minimal average of 70% after the third test. The final will be made available at 5:00 pm on Tuesday, December 5. The final must be submitted by 4:59 pm on Thursday, December 7.

While I have made a sincere effort to ensure that this syllabus is correct, changes may be required. I will announce any substantive changes in a BlackBoard announcement. If you find an error or omission, please advise me at once so that the other members of the class may be advised.

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Important Information for Students

Lamar University expressly prohibits intimidation and harassment of students, faculty, staff, or applicants. http://students.lamar.edu/academic-support/code-of-conduct.html

Drop Policy: Please make note of the three dates indicated in this drop policy. Any drop will be your responsibility; I will not drop a student from the course.
***September 13, 2017*:** (Census Date-Six Drop Rule does not apply) A student may drop or withdraw without consulting with the instructor. The Six Drop Rule does not apply to a drop before 5:00 PM.
***September 29, 2017*:** (Six Drop Rule applies) A student may drop or withdraw from the course without academic penalty and receive a Q, however, the Six Drop Rule applies. The student will consult with the instructor and the Records Office to initiate a drop.
***November 3, 2017*:** (Six Drop Rule applies) Last day to drop or withdraw with academic penalty; the student must be passing the course at the time of the requested drop in order to receive a Q. The drop form, including all required signatures, must arrive in the Records Office by no later than 4:00 PM. No drop is allowed after this date except in extreme extenuating circumstances. Any "late drop" must be approved by the instructor, department chair, college dean, and provost.

Academic Integrity: Students are expected to maintain complete honesty and integrity in their academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. Students are specifically warned against all forms of cheating and plagiarism. The *Lamar University Student Handbook* clearly reads: "Any student found guilty of academic dishonesty in any phase of academic work will be subjected to disciplinary action. Punishable offenses include, but are not limited to, cheating on an examination or academic work which is to be submitted, plagiarism, collusion, and the abuse of source materials." One aspect of the *Handbook*'s definition of cheating includes "purchasing or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm." Plagiarism is defined as "the appropriation and the unacknowledged incorporation of another's work or ideas into one's own and submitted for credit." Faculty members in the College of arts and Sciences investigate all cases of suspected plagiarism. Any student who is found cheating in this course will receive a course grade of F. http://students.lamar.edu/student-handbook.html

Accommodations through the Disability Resource Center: Lamar University is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is located in the Communications building room 105. Office staff collaborate with students who have disabilities to provide and/or arrange reasonable accommodations. If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please

contact the DRC at 409-880-8347 or drc@lamar.edu to arrange a confidential appointment with the Director of the DRC to explore possible options regarding equitable access and reasonable accommodations. If you are registered with DRC and have a current letter requesting reasonable accommodations, we encourage you to contact your instructor early in the semester to review how the accommodations will be applied in the course.
http://www.lamar.edu/disability-resource-center/

Incomplete Grades: The grade of "I" may be given when any requirement of the course, including the final examination, is not completed. Arrangements to complete deficiencies in a course should be made with the instructor prior to the end of the semester or term. Incomplete work must be finished during the next long semester or the Records Office will change the "I" to the grade of "F." While the extension may be granted by the instructor with the approval of his/her Department Chair and Academic Dean, once the "I" is changed to an "F" it cannot be changed back to an "I." In this case, either a "change of grade" procedure must be initiated or the course must then be repeated if credit is desired. The instructor may record the grade of "F" for a student who is absent from the final examinations and is not passing the course.

Campus Closure: In the event of an announced campus closure in excess of four days due to a hurricane or other disaster, students are expected to login to Lamar University's website's homepage for instructions about continuing courses remotely. http://lamar.edu

Emergency Procedures: Many types of emergencies can occur on campus; instructions for severe weather or violence/active shooter, fire, or chemical release can be found at:
http://www.lamar.edu/about-lu/administration/risk-management/index.html
Following are procedures for the first two:

Severe Weather:

- Follow the directions of the instructor or emergency personnel.
- Seek shelter in an interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside.
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building.
- Stay in the center of the room, away from exterior walls, windows, and doors.

Violence/Active Shooter:

- **CALL -** 8-3-1-1 from a campus phone (880-8311 from a cell phone). Note: Calling 9-1-1 from either a campus phone or cell phone will contact Beaumont City Police Dispatch rather than University Police.
- **AVOID-** If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY-** Barricade the door with desks, chairs, bookcases or any other items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it is safe.
- **DEFEND-** Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.

Course Evaluations: You will have an opportunity to evaluate all aspects of this course in a formal process to be completed online near the end of the term. You will receive an email reminder through your LU account.

MATH 1316 – TRIGONOMETRY

Note: The following problems are optional, and will not count towards a student's grade.

Trigonometry, 2nd Ed. By Beecher

Sec.	Topic	Problems
Sec. 1-1	Trigonometric Functions of Acute Angles	1, 3, 6, 7, 11, 15, 17, 20, 22, 23, 28, 30, 55, 63, 66, 73, 77, 83, 87, 88, 91, 92, 93, 94, 95, 97, 115
Sec. 1-2	Applications of Right Triangles	2, 3, 8, 9, 14, 17, 20, 21, 23, 26, 32, 33, 37, 46
Sec. 1-3	Trigonometric Functions of Any Angle	1, 4, 5, 9, 12, 13, 17, 19, 23, 26, 27, 29, 31, 34, 35, 37, 39, 40, 44, 47, 49, 61, 68, 75, 79, 83, 85, 87, 90, 97, 100, 101, 103, 105, 118
Sec. 1-4	Radians, Arc Length, and Angular Speed	1, 2, 6, 7, 10, 11, 13, 23, 27, 28, 31, 32, 33, 35, 41, 44, 47, 52, 53, 58, 60, 65, 69, 71, 75, 78, 96, 97, 100
Sec. 1-5	Circular Functions: Graphs & Properties	1, 4, 9, 12, 17, 19, 20, 21, 25, 32, 37, 43, 47, 49, 53, 54, 55, 56, 69, 72, 73, 75, 80
Sec. 1-6	Graphs of Transformed Sine and Cosine Functions	1, 3, 7, 12, 16, 17, 19, 26, 29, 33, 37, 43, 45, 49, 53, 58, 70, 89, 101
Sec. 2-1	Pythagorean & Sum & Difference Identities	1, 2, 6, 7, 9, 11, 13, 15, 18, 19, 22, 25, 28, 32, 36, 38, 39, 41, 43, 45, 47, 50, 51, 54, 57, 58, 61, 66, 71, 74, 76, 85, 88, 93, 94, 97, 105, 108
Sec. 2-2	Cofunction, Double-Angle, & Half-Angle ID's	3, 5, 6, 10, 11, 13,17, 21, 22, 25, 27, 29, 31, 43, 46, 49, 55, 59, 61
Sec. 2-3	Proving Trigonometric Identities	1, 5, 6, 9, 12, 18, 21, 25, 29, 33, 36, 40, 45, 46, 49, 61, 65
Sec. 2-4	Inverses of the Trigonomometric Functions	1, 2, 7, 10, 11, 19, 22, 24, 29, 35, 39, 40, 43, 45, 52, 56, 57, 65, 81, 83
Sec. 2-5	Solving Trigonometric Equations	4, 5, 6, 11, 13, 18, 21, 24, 28, 29, 31, 32, 37, 39, 65, 68, 72
Sec. 3-1	The Law of Sines	3, 6, 9, 17, 20, 22, 24, 25, 27, 30, 46
Sec. 3-2	The Law of Cosines	1, 3, 6, 11, 16, 18, 21, 23, 27, 28, 30, 36, 51
Sec. 3-3	Complex Numbers: Trigonometric Form	3, 8, 11, 13, 16, 21, 23, 27, 30, 35, 37, 40, 43, 47, 52, 57, 60, 65, 72, 73, 91, 96
Sec. 3-4	Polar Coordinates and Graphs	2, 4, 5, 12, 15, 18, 21, 24, 27, 29, 33, 36, 40, 43, 49, 53, 54, 59, 60, 63, 67, 79, 86
Sec. 3-5	Vectors and Applications	1, 6, 7, 13, 16, 19, 23, 25, 29, 30, 38, 39, 42
Sec. 3-6	Vector Operations	3, 5, 9, 13, 16, 17, 24, 27, 34, 35, 39, 47, 50, 53, 56, 60, 63, 66, 67, 71, 73, 80, 83, 85, 99