WAYLAND
BAPTIST UNIVERSITY

VIRTUAL CAMPUS
SCHOOL OF MATHEMATICS & SCIENCES

Wayland Baptist University exists to educate students in an academically challenging, learning-focused and distinctively Christian environment for professional success and service to God and human kind.

COURSE NO. AND TITLE: MATH 1305-VC01 – TRIGONOMETRY
TERM: SUMMER 2019
INSTRUCTOR: Mrs. Lori D. Franklin, Adjunct Professor of Mathematics
MOBILE/SMS: 806-392-1750
EMAIL: lori.franklin@wayland.wbu.edu

Description:	Trigonometric functions, solutions of triangles, trigonometric identities, trigonometric function graphs, and trigonometric forms of complex numbers and vectors.
Prerequisites:	MATH 1304 (College Algebra) or equivalent
Placement:	This class is intended for students who plan to major or minor in mathematics or science who have not had Trigonometry or Pre-Calculus in high school.

Required Resources:

Lecture Notes:	Trigonometry: Lecture Notes by Dr. Scott Franklin (Download from Blackboard)
Lecture Videos:	Downloaded/Streaming through Blackboard
Student Access Pack:	MyLab Student Access Kit – Available through RedShelf link in Blackboard
Supplies:	All students need to have a scientific calculator that has at least $\log x$ and $\ln x$ functions, and the exponential function (e^x). You will NOT be allowed to use your smart phone as a calculator on the exams.

Optional Resource:

Textbook (hard copy):   Trigonometry: A Unit Circle Approach 9/e by Michael Sullivan (ISBN 9780321716576)
NOTE: The hard copy of the textbook is optional because the access code above will grant you access to an online copy of the textbook.

Outline and Outcome Competencies:

To understand and apply the following concepts:

Angles
Degrees, Minutes, Seconds, Radians
Arc Length, Sector Area

Trigonometric Functions
Unit Circle
Sine, Cosine, Tangent, Cosecant, Secant, Cotangent
Exact Values, Special Angles
Domains, Ranges, Periods, Even, Odd
Identities
Sinusoidal Graphs, Amplitude, Period, Phase Shift

Inverse Trigonometric Functions
Definition, Domains, Ranges
Cancellation with Trigonometric Functions
Exact Values

Trigonometric Identities
Establishing Identities
Sum and Difference Formulas
Double-Angle and Half-Angle Formulas
Product-to-Sum and Sum-to-Product Formulas

Trigonometric Equations
> General Solutions
> Solutions on a Given Interval

Right Triangles
> Hypotenuse, Pythagorean Theorem
> Complementary Angles
> SOHCAHTOA
> Law of Sines, ASA, SAA, SSA
> Law of Cosines, SAS, SSS
> Area of a General Triangle, Heron's Formula

Harmonic Motion
> Simple Harmonic Motion
> Damped Harmonic Motion

Polar Coordinates
> Converting Points to and from Rectangular Coordinates
> Converting Equations to and from Rectangular Coordinates
> Polar Graphs

Complex Numbers
> Conjugate, Magnitude, Modulus, Argument
> Rectangular and Polar Forms
> Multiplication, Division, Powers, and Roots of Complex Numbers in Polar Form

Vectors
> Magnitude, Direction
> Addition, Subtraction, Geometry
> Unit Vector, Polar Form
> Dot Product, Angle between Vectors, Parallel, Orthogonal
> Projection of One Vector onto Another
> Work
> Vectors in Space, Cross Product

Statement on Plagiarism and Academic Dishonesty: Wayland Baptist University observes a zero tolerance policy regarding academic dishonesty. Per university policy as described in the academic catalog, all cases of academic dishonesty will be reported and second offenses will result in suspension from the university.

Disability Statement: In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291-3765. Documentation of a disability must accompany any request for accommodations.

Course Requirements and Grading Criteria:

There are 4 components to the final grade in this course.

1. **Homework Exercises:** You have homework exercises that must be completed for each section that we cover in the course. You will complete those online through the MyMathLab Course Interface (pearsonmylabandmastering.com). When you login to CourseCompass/MyMathLab you will be able to click on Homework and view your homework exercises.

2. **Weekly Quizzes:** By the end of each week of the course you will be required to complete an online quiz covering the sections from that week. The deadline for completing this quiz will be 5pm (CDT) on Monday, each week. You can take the quiz up to *five times* and your highest score will be counted. Each time you take the test, the questions will be randomly generated, but of the same type.

3. **Exams:** During the course, there will be two major exams: a Midterm and a Final. Each test will cover half of the course. Both of these tests are to be taken in person at one of the external campuses or a testing center. They will be paper and pencil tests which will be mailed to your instructor for grading. They must be proctored by an approved representative of the University.

4. **Lecture Video and Notes:** You will be required to watch the videos for this course and completely fill in the lecture notes for each section. This will be verified at each of the proctored exams. You will be required to bring it with you to these tests, although you cannot use it while taking the exam.

Grade Calculation:

Homework 25%
Weekly Quizzes 25%
Exams 40%
Lecture Video and Notes: 10%

A: 90 – 100   B: 80 – 89   C: 70 – 79   D: 60 – 69   F: Below 60

Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.

Course Schedule (All times are for the Central Time Zone, so plan accordingly)

Week 1: May 27 – June 3
Introduce yourself on discussion board
Email Mrs. Franklin from Wayland Email Address
Videos and Notes for Sections 1.1, 1.2, and 1.3-1.5
Homework Exercises for Sections 1.1, 1.2, and 1.3-1.5
Weekly Quiz covering Sections 1.1, 1.2, and 1.3-1.5
Due by Monday at 5:00p.m. (CDT), June 3.

Week 2: June 4 - June 10
Videos and Notes for Sections 2.1, 2.2, 2.3
Homework Exercises for Sections 2.1, 2.2, 2.3
Weekly Quiz covering Sections 2.1, 2.2, 2.3
Due by Monday at 5:00 p.m. (CDT), June 10.

Week 3: June 11 - June 17
Videos and Notes for Sections 2.4, 2.5, 2.6
Homework Exercises for Sections 2.4, 2.5, 2.6
Weekly Quiz covering Sections 2.4, 2.5, 2.6
Due by Monday at 5:00p.m. (CDT), June 17.

Week 4: June 18 - June 24
Videos and Notes for Sections 3.1, 3.2, 3.3
Homework Exercises for Sections 3.1, 3.2, 3.3
Weekly Quiz covering Sections 3.1, 3.2, 3.3
Due by Monday at 5:00p.m. (CDT), June 24.

Week 5: June 25 – July 1
Videos and Notes for Sections 3.4, 3.5, 3.6
Homework Exercises for Sections 3.4, 3.5, 3.6
Weekly Quiz covering Sections 3.4, 3.5, 3.6
Due by Monday at 5:00p.m. (CDT), July 1.

Week 6: July 2 - July 8
Videos and Notes for Section 3.7
Homework Exercises for Section 3.7
Weekly Quiz covering Section 3.7
Due by Monday at 5:00p.m. (CDT), July 8.

MIDTERM EXAM (Sections 1.1-3.7) DUE by 5:00p.m. (CDT), Monday, July 8
Pencil and paper exam (Proctored)

Week 7: July 9 - July 15
Videos and Notes for Section 4.1, 4.2, 4.3
Homework Exercises for Section 4.1, 4.2, 4.3
Weekly Quiz covering Section 4.1, 4.2, 4.3
Due by Monday at 5:00p.m. (CDT), July 15.

Week 8: July 16 - July 22
Videos and Notes for Sections 4.4, 5.1, 5.2
Homework Exercises for Sections 4.4, 5.1, 5.2
Weekly Quiz covering Sections 4.4, 5.1, 5.2
Due by Monday at 5:00p.m. (CDT), July 22.

Week 9: July 23 - July 29
Videos and Notes for Sections 5.3, 5.4, 5.5
Homework Exercises for Sections 5.3, 5.4, 5.5
Weekly Quiz covering Sections 5.3, 5.4, 5.5
Due by Monday at 5:00p.m. (CDT), July 29.

Week 10: July 30 – August 5
Videos and Notes for Sections 5.6, 5.7
Homework Exercises for Sections 5.6, 5.7
Weekly Quiz covering Sections 5.6, 5.7
Due by Monday at 5:00p.m. (CDT), August 5.

Week 11: August 6 – August 10
Review for Final
No assignments

FINAL EXAM (Sections 4.1-5.7) DUE by 5:00p.m. (CST), Saturday, August 10.
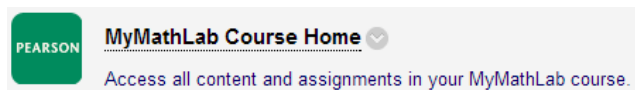**Pencil and paper exam (Proctored)**

Academic Honesty: Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to this course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanctions to any student involved.

Important Details: READ CAREFULLY!

Here are a few VERY important details that you should make note of as you prepare to get the course underway:

Pearson My Lab and Mastering (MyMathLab)

All of the homework for this course will be completed using an online homework tool from Pearson Publishing. The tool is called **MyMathLab**. You will see this icon in your Blackboard course on links and assignments that will take you the **MyMathLab** tool:

The VERY FIRST THING YOU NEED TO DO is set up your student account at MyLab before you begin any work in the course. You should have a Student Access Code and a Getting Started pack included with your textbook. Please use the **MyMathLab** Course Home link in Blackboard (in the **Begin Here** area) to set up and link your **MyMathLab** account with your Blackboard account. *If you have any problems, please email your instructor immediately!*

After setting up the account is to run the "**Installation Wizard**" and view "**How to Enter Answers**" tours and tip sheets for information about entering math notation.

Online Lecture Notes

As part of this course, you will watch the series of lecture videos and fill in the lecture notes. The proctor that you use for your midterm and final will verify that you have filled in the lecture note book. The lecture notebook is available by download in Blackboard.

The videos posted in the Blackboard site. You will definitely need a broadband internet connection to watch the videos online. As I mentioned, your proctor for your midterm and final will confirm that you have filled them out so be sure to take them with you to the proctored exams. *If you have any problems, please email your instructor immediately!*

Proctored Midterm and Final

Both the Midterm and the Final are paper and pencil tests and must be administered by a Wayland-approved proctor. A proctor is an approved person who will administer the exam, monitor the testing environment, and scan and email the test to your instructor. You are responsible for finding a proctor and getting them approved.

If you live in a city with a Wayland campus, you must take the tests on that campus, so you do not need to submit a proctor request form. However, you should contact the campus the week before your test to arrange a date and time for you to take the test, to find out where the test will be administered, and to give them the course number (MATH1305) and instructor name (Mrs. L. Franklin).

For the Plainview campus, contact the Virtual Campus offices at 806-291-3740.

For external campuses, see the listing at http://www.wbu.edu/about_wayland/campus_locations/ for contact information.

If you cannot take the tests on a Wayland campus, you must have your proctor approved by the Virtual Campus before they can administer the tests. The proctor must be approved every term (but only once per term) even if they have proctored tests for Wayland in past terms. Commonly used proctors are librarians holding a Master of Library Sciences, authorized employees at U.S. Military Education centers, and college testing centers (like Sylvan Learning). See the proctor request form for more details.

Proctored Midterm and Final (continued)

The proctor request form is located at
http://www.wbu.edu/academics/online_programs/proctor/proctorrequest.htm. Once the form is filled out, the proctor will receive an email requesting they provide certain information for verification. When the information has been provided, the Virtual Campus will approve or deny the request and will notify both the student and the proctor by email. **This entire process must be completed at least a week before the Midterm**. Do not forget to contact the proctor the week before the test to arrange a date and time and location (and to let them know the course number and instructor name).

Please email me with any questions you may have: Mrs. Franklin's email: lori.franklin@wayland.wbu.edu