KNOWLEDGE IS POWER

SPRING 2025

Welcome to Plane Trigonometry

Meets on Monday and Wednesday at 7:00 p.m. at the Lubbock Downtown Center room B030 in Lubbock, TX

Are you ready to explore the relationship between the angles and sides of a triangle? As your instructor, I am looking forward to teaching you the math skills needed for creating satellite systems, roofing a house, creating maps, and navigating ships and aircraft.

Student Help Sessions (A.K.A. Office Hours)
Lubbock Downtown Center (B001):
Mondays and Wednesdays 5:30 pm - 6:30 pm

Levelland Campus (Math Building M120A):
Tuesdays and Thursdays 3:00 pm - 4:00 pm

Online (Virtual) (Link on Blackboard):
Tuesdays 1:00 pm - 2:00 pm
Wednesdays 8:00 am - 9:00 am
Thursdays 8:00 pm - 9:00 pm
Fridays 1:30 pm - 2:30 pm
                  or **by appointment**
(scan QR code or use the link to make an appointment)
Schedule an appointment

SPC

Dr. Sheyleah Harris-Plant
(she, her, hers)

DR. HP

CONTENTS

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MATH BUILDING 120A

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What are we required to do for this class?

Our classroom is flipped. This means the lecture is completed outside of class, and discussion, practice, and assignments occur during class.

This format allows for us to personalize the speed of the lecture for our learning styles and practice with the instructor present to answer questions.

Practice problems (homework problems) will not be collected for a grade because the amount of practice each person needs is individual to their learning style and mathematical history.

To get the most out of a flipped classroom, before arriving for the class meeting, we should have:
1. worked through the notes and videos for that week's lessons, and
2. completed **some** of the assigned exercises

Upon arriving at the class meeting, we will
1. answer questions over exercises,
2. work through exercises, and
3. submit assignments and quizzes.

COURSE LEARNING GOALS

At the end of the semester, we will be able to:

- Compute the values of trigonometric functions
- Graph trigonometric functions
- Prove trigonometric identities
- Solve trigonometric equations
- Solve right and oblique triangles
- Use the concepts of trigonometry to solve applications.

SUPPLIES & OPTIONAL TEXTS

Writing Utensil

8.5 inch x 11 inch paper

Non-Programmable Scientific Calculator (No Graphing)

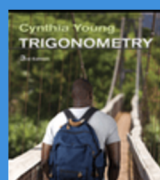Trigonometry, 5th ed.
Mark Dugopolski
ISBN 9780135207338

Trigonometry, 9th ed.
Margaret L. Lial
John Hornsby
David I. Schneider
ISBN 9780321528858

Good Internet Connection

Web Camera

Trigonometry, 3rd ed.
Cynthia Young
ISBN 9780470648025

What are the assignments for this class?

Weekly Lecture Notes (Worth 0.50 points each)
Each week has lecture notes available to be printed and lecture videos covering the lecture notes. The lecture notes will be submitted on Blackboard and graded on completion. There will be 15 notes, with five (5) notes being extra credit. Any missed lecture notes will not be allowed to be taken after the due date.

Memory Quizzes (Worth 0.50 points each)
Free response assessment that will be completed using your memory. Notes or calculators are not allowed to be used. The assignment is administered and submitted weekly to Gradescope in class. The assignment will be graded as correct or incorrect. There will be 14 quizzes, with four (4) quizzes being extra credit. Any missed Memory Quiz will not be allowed to be taken after the due date.

Mastery Assessments (Worth 0.5 point each)
Free response assessment that you can use your notes. The purpose of the assignment is to give us a snapshot of the mastery of the course material for that week. The assignment is administered and submitted weekly to Gradescope in class. There will be 15 assessments, with five (5) assessments being extra credit. Any missed Mastery Assessment will not be allowed to be taken after the due date.

Learning Reflections (Worth 0.5 points each)
Answer questions on Blackboard weekly to reflect, review mistakes, and learn from them. The assignment will be graded by completion. There will be 15 assignments, with five (5) assignments being extra credit. Any missed Learning Reflection will not be allowed to be taken after the due date.

Unit Exams (Worth 12 points each)
Free response assessment that you can not use your notes or practice problems. Any missed exam will not be allowed to be taken after the due date. The purpose of the assignment is to give us a snapshot of the mastery of the unit material at that time. The assignment is administered and submitted to Gradescope in class. There will be five (5) exams, with no extra credit assignments.

Written Final Exams (Worth 10 points)
Comprehensive free response assessment that you can not use your notes or practice problems. If you do not attempt the Final Exam you will earn an F for the class even if enough points to pass has been earned. There will only be one assignment at the end of the semester.

To find the relative (percentage) grade, divide the total points by the possible points and multiply by 100.

ASSIGNMENT WEIGHTS

The 100 point system is used for grading and will the highest grade reported at the end of the semester. All assignments will add up to 100 points.

89.5 and above earn an A
79.5 - 89.49 earn a B
69.5 - 79.49 earn a C
59.5 - 69.49 earn a D
59.49 and below earn an F

- Weekly Lecture Notes: 5 points
- Memory Quizzes: 5 points
- Mastery Assessments: 5 points
- Learning Reflections: 5 points
- Unit Exams: 60 points
- Final Exam: 20 points

Legend: Weekly Lecture Notes, Memory Quizzes, Mastery Assessments, Learning Reflections, Unit Exams, Final Exam

Weekly Lecture Notes 5 — Learning Reflections 5 — Final Exam 20 — Unit Exams 60
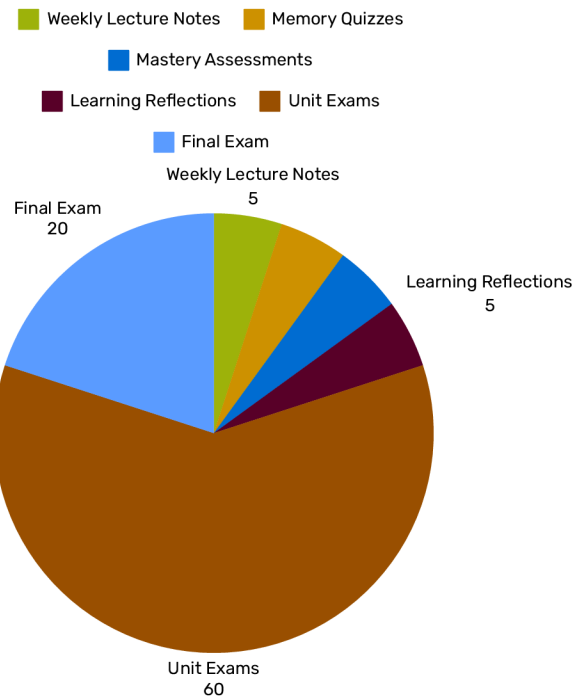
Participation Expectations

Accountability
If you miss class or fall behind for any reason, all notes presented in class will be on the Class OneNote Notebook for you to access. Unfortunately, I cannot repeat material or change the schedule for the entire class. Late coursework is not accepted, nor will be allowed to be taken or submitted after the due date.

Communication
Communication is key. If you have an emergency, please let me know by email or phone **immediately**. Letting me know the following day or later makes it difficult for me to discern and assess your situation. Therefore, this makes it harder to help and work with you.

Integrity
The focus of higher education is to foster learning and encourage critical thinking. While taking shortcuts to save time or to try and earn a grade may seem like a good idea, the results usually are lower scores and losing the opportunity to learn material.

Reasonable Flexibility
Extra credit points are available for all students. If you should miss an assignment deadline those extra credit points can "replace" the missed points.

EXPECTATIONS OF INSTRUCTOR

- Show up, as scheduled.
- Provide notice of any schedule changes.
- Keep Blackboard updated with grades and materials.
- Present the material in a way that the majority of the class can understand.
- Be available to those who need assistance outside of the classroom, by e-mail or in person, during office hours or scheduled appointment times.
- Maintain the course calendar and assignments.
- Uphold the policies of the college.
- Respect each student and provide the opportunity to discuss the material presented during the lecture period.
- Provide examinations based on the information discussed in course material.

WEB & EMAIL

Emails Should Include

@ Your first and last name

@ Your class name and section

@ Your questions and/or comments in the body of the email (not subject line)

I Will

@ Check my messages regularly during weekdays before 7:00 pm

@ Do my best to respond within 24 hours

I Will Not

@ Always respond immediately on weekends or holidays

@ Respond to parents or counselors. You are the student in an adult class and should communicate for yourself

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Success Roadmap

Watch Videos

Each section has lecture videos embedded in Blackboard in the Course Content for each week. Please watch them before attending class.

Practice Math Skills

Each lecture has examples worked out and some examples for you to practice. Each lecture has practice problems for you to practice your math skills.

Suggested Schedule

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Days	Actions
Sunday	Watch the week's lecture videos and work examples
Monday	Attend class, practice skills covered in week's material, and take assessments
Tuesday	Practice skills covered in week's material
Wednesday	Attend class, practice skills covered in week's material, and take assessments
Thursday - Saturday	Practice skills covered in week's material or prepare for the next week

COURSE OBJECTIVES

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

ATTENDANCE POLICY

Attendance and engagement are the most critical activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments throughout the semester. The student is expected to attend at least eighty percent (80%) of the total class meetings and submit at least eighty percent (80%) of the total class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor **may** remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student can not receive an X, the instructor will assign an F.

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We Remember

by Edgar Dale

10% of what we read

20% of what we hear

30% of what we see

50% of what we see and hear

70% of what we say and write

90% of what we do

MATHEMATICAL PRACTICES TO IMPROVE

1. Making sense of problems and persisting while solving them.

2. Engaging in productive struggle with mathematics problems.

3. Productively collaborate with others.

4. Communicate through mathematical writing.

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Student Resources

Class Resources

In our Blackboard course, there are a lot of resources to help us be successful.

- Each example, even the ones not worked out in the lecture videos, has a video in the example videos folder. Please keep in mind that the videos are in a playlist, and you will need to choose the required video from the list provided by the menu icon on the upper right.

- Keys (worked-out solutions) are provided for every practice problem and every assessment (after the due date) in the Keys folder.

- All notes written in class can be found in your Class OneNote Notebook which has a link provided in Blackboard for us to access after entering our SPC credentials.

- Under Additional Resources, there are practice slides for the memory quiz information, study tips, prerequisite math rules, graph paper, and online resources.

Free SPC Tutoring

South Plains College provides free tutoring to students. The most current schedule can be found at https://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php or this QR Code.

SPC Policies

South Plains College policies concerning diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, and Campus Concealed Carry Statements can be found here: https://www.southplainscollege.edu/syllabusstatements/ or this QR Code.

South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: https://www.southplainscollege.edu/emergency/covid19-faq.php.

The person who asks a question is a fool for five minutes, they who does not ask a question remains a fool forever.
  - Chinese Proverb

I find that the harder I work, the more luck I seem to have.
  - Thomas Jefferson

Learning is never done without errors and defeat.
  - Vladimir Lenin

However difficult life may seem, there is always something you can do and succeed at.
  - Stephen Hawking

Your talents and abilities will improve over time, but for that, you have to start.
  - Martin Luther King, Jr

REAL LIFE EMERGENCY HELP

Sometimes life happens and we need help. This is the reason the South Plains College Health and Wellness Center has provided a list of emergency resources. This list includes, but is not limited to community food assistance, help paying bills, and other free or reduced cost programs. To find this list, please click on the *Emergency Resources* tab, and click the linked here. The Health and Wellness Center site is found at https://www.southplainscollege.edu/health/studenthealth.php or this QR Code

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Applications Used

Gradescope

We will use Gradescope this term, which allows us to provide fast and accurate feedback on your work. Homework will be submitted through Gradescope, and homework and exam grades will be returned through Gradescope. As soon as grades are posted, you will be notified immediately so that you can log in and see your feedback. You may also submit regrade requests if you feel that there is a mistake in the grading.

You can use your phone's camera or another scanner to upload work to Gradescope. Download the Gradescope mobile app on the **App Store** or **Google Play** to use your phone's camera and follow the prompts. If you cannot scan your assignments for any reason, please get in touch with me to make alternative arrangements. All submissions to Gradescope must be clear, legible, and double-checked to ensure all answers are properly marked. You will receive an email confirmation once your assignment is successfully submitted; please retain this for your records.

Honorlock

Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from home. You **do not** need to create an account or schedule an appointment in advance. Honorlock is available 24/7, and all required is a computer, a working webcam/microphone, your ID, and a stable internet connection.

You will need Google Chrome and download the Honorlock Chrome Extension to get started.

When you are ready to complete your assessment, log into your LMS, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself and show your ID. You may be prompted to complete a room scan during the authentication steps. This is a test taker authentication step in which you will be asked to perform a 360-degree scan of your environment with the computer or webcam to confirm the integrity of the testing environment. Honorlock will be recording your exam session through your webcam and microphone and recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device.

Honorlock support is available 24/7/365. You may contact them through live chat on the support page or within the exam itself if you encounter any issues.

Blackboard

We will use Blackboard this term, which allows is our Learning Management System (LMS). It will house all of the course materials, resources, and grades. The gradebook will automatically give a zero for any assignment not graded by the due date. Do not worry if you submitted your assignment, I will change the grade once the assignment is graded.

Download the Blackboard mobile app on the **App Store** or **Google Play** to have mobile access to Blackboard.

Spring 2025 MATH-1316 Tentative Calendar

Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
0	Thu	9 Jan	• Class Introduction • Algebra Review	Not due this week	Not due this week	Not due this week	Not due this week	Mon, 13 Jan by 20:15 (8:15 pm) **In Class**
	Fri	10 Jan						
1	**Mon**	**13 Jan**	• Angles • Non-Acute Angles	Not due this week	Not due this week	Sat, 18 Jan by 23:30 (11:30 pm)	Mon, 27 Jan by 20:15 (8:15 pm) **In Class**	Wed, 5 Feb by 20:15 (8:15 pm) **In Class**
	Tue	14 Jan						
	Wed	**15 Jan**						
	Thu	16 Jan						
	Fri	17 Jan						
2	**Mon**	**20 Jan**	• Trigonometric Functions	**No School – Martin Luther King, Jr Day**				
	Tue	21 Jan		Sat, 25 Jan by 23:30 (11:30 pm)	Wed, 22 Jan by 20:15 (8:15 pm) **In Class**	Sat, 25 Jan by 23:30 (11:30 pm)	Wed, 29 Jan by 20:15 (8:15 pm) **In Class**	Wed, 5 Feb by 20:15 (8:15 pm) **In Class**
	Wed	**22 Jan**						
	Thu	23 Jan						
	Fri	24 Jan						
3	**Mon**	**27 Jan**	• Non-Standard Position Angles • *Review for Unit 1 Exam*	Thu, 30 Jan by 23:30 (11:30 pm)	Wed, 29 Jan by 20:15 (8:15 pm) **In Class**	Sat, 1 Feb by 23:30 (11:30 pm)	Mon, 3 Feb by 20:15 (8:15 pm) **In Class**	Wed, 5 Feb by 20:15 (8:15 pm) **In Class**
	Tue	28 Jan						
	Wed	**29 Jan**						
	Thu	30 Jan						
	Fri	31 Jan						
4	**Mon**	**3 Feb**	• Using a Calculator • Solving Right Triangles	Thu, 6 Feb by 23:30 (11:30 pm)	Mon, 3 Feb by 20:15 (8:15 pm) **In Class**	Sat, 8 Feb by 23:30 (11:30 pm)	Mon, 10 Feb by 20:15 (8:15 pm) **In Class**	Wed, 26 Feb by 20:15 (8:15 pm) **In Class**
	Tue	4 Feb						
	Wed	**5 Feb**						
	Thu	6 Feb						
	Fri	7 Feb						

Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
5	**Mon**	**10 Feb**	• Law of Sines • Law of Cosines	Thu, 13 Feb by 23:30 (11:30 pm)	Wed, 12 Feb by 20:15 (8:15 pm) **In Class**	Sat, 15 Feb by 23:30 (11:30 pm)	Mon, 17 Feb by 20:15 (8:15 pm) **In Class**	Wed, 26 Feb by 20:15 (8:15 pm) **In Class**
	Tue	11 Feb						
	Wed	**12 Feb**						
	Thu	13 Feb						
	Fri	14 Feb						
6	**Mon**	**17 Feb**	• Triangle Applications • Radian Applications • *Review for Unit 2 Exam*	Thu, 20 Feb by 23:30 (11:30 pm)	Wed, 19 Feb by 20:15 (8:15 pm) **In Class**	Sat, 22 Feb by 23:30 (11:30 pm)	Mon, 24 Feb by 20:15 (8:15 pm) **In Class**	Wed, 26 Feb by 20:15 (8:15 pm) **In Class**
	Tue	18 Feb						
	Wed	**19 Feb**						
	Thu	20 Feb						
	Fri	21 Feb						
7	**Mon**	**24 Feb**	• Characteristics of Trigonometric Functions • Sine and Cosine Graphs	Thu, 27 Feb by 23:30 (11:30 pm)	Mon, 24 Feb by 20:15 (8:15 pm) **In Class**	Sat, 1 Mar by 23:30 (11:30 pm)	Mon, 3 Mar by 20:15 (8:15 pm) **In Class**	Wed, 12 Mar by 20:15 (8:15 pm) **In Class**
	Tue	25 Feb						
	Wed	**26 Feb**						
	Thu	27 Feb						
	Fri	28 Feb						
8	**Mon**	**3 Mar**	• Secant and Cosecant Graphs • Tangent and Cotangent Graphs • *Review for Unit 3 Exam*	Thu, 6 Mar by 23:30 (11:30 pm)	Wed, 5 Mar by 20:15 (8:15 pm) **In Class**	Sat, 8 Mar by 23:30 (11:30 pm)	Mon, 10 Mar by 20:15 (8:15 pm) **In Class**	Wed, 12 Mar by 20:15 (8:15 pm) **In Class**
	Tue	4 Mar						
	Wed	**5 Mar**						
	Thu	6 Mar						
	Fri	7 Mar						

Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
9	**Mon**	**10 Mar**	• Fundamental Identities • Simplifying Trigonometric Identities	Thu, 13 Mar by 23:30 (11:30 pm)	Mon, 10 Mar by 20:15 (8:15 pm) **In Class**	Sat, 15 Mar by 23:30 (11:30 pm)	Mon, 24 Mar by 20:15 (8:15 pm) **In Class**	Wed, 9 Apr by 20:15 (8:15 pm) **In Class**
	Tue	11 Mar						
	Wed	**12 Mar**						
	Thu	13 Mar						
	Fri	14 Mar						
17 Mar – 21 Mar			**No School – Spring Break**					
10	**Mon**	**24 Mar**	• Verifying Trigonometric Identities	Thu, 27 Mar by 23:30 (11:30 pm)	Wed, 26 Mar by 20:15 (8:15 pm) **In Class**	Sat, 29 Mar by 23:30 (11:30 pm)	Mon, 31 Mar by 20:15 (8:15 pm) **In Class**	Wed, 9 Apr by 20:15 (8:15 pm) **In Class**
	Tue	25 Mar						
	Wed	**26 Mar**						
	Thu	27 Mar						
	Fri	28 Mar						
11	**Mon**	**31 Mar**	• Inverse Trigonometric Functions • Solving Trigonometric Equations with Single Angles • *Review for Unit 4 Exam*	Thu, 3 Apr by 23:30 (11:30 pm)	Wed, 2 Apr by 20:15 (8:15 pm) **In Class**	Sat, 5 Apr by 23:30 (11:30 pm)	Mon, 7 Apr by 20:15 (8:15 pm) **In Class**	Wed, 9 Apr by 20:15 (8:15 pm) **In Class**
	Tue	1 Apr						
	Wed	**2 Apr**						
	Thu	3 Apr						
	Fri	4 Apr						
12	**Mon**	**7 Apr**	• Sum and Difference Identities • Double-Angle Identities	Thu, 10 Apr by 23:30 (11:30 pm)	Mon, 7 Apr by 20:15 (8:15 pm) **In Class**	Sat, 12 Apr by 23:30 (11:30 pm)	Mon, 14 Apr by 20:15 (8:15 pm) **In Class**	Wed, 23 Apr by 20:15 (8:15 pm) **In Class**
	Tue	8 Apr						
	Wed	**9 Apr**						
	Thu	10 Apr						
	Fri	11 Apr						

Week	Day	Date	Topic	Learning Reflection Due	Memory Quiz Due	Lecture Notes Due	Mastery Assessment Due	Exam Due
13	**Mon**	**14 Apr**	• Half-Angle and Power-Reducing Identities • Sum-to-Product and Product-to-Sum Identities • Solving Trigonometric Equations with Multiple Angles • *Review for Unit 5 Exam*	Thu, 17 Apr by 23:30 (11:30 pm)	Wed, 16 Apr by 20:15 (8:15 pm) **In Class**	Sat, 19 Apr by 23:30 (11:30 pm)	Mon, 21 Apr by 20:15 (8:15 pm) **In Class**	Wed, 23 Apr by 20:15 (8:15 pm) **In Class**
	Tue	15 Apr						
	Wed	**16 Apr**						
	Thu	17 Apr						
	Fri	18 Apr						
14	**Mon**	**21 Apr**	• Vectors and Dot Product • Vector Applications	Thu, 24 Apr by 23:30 (11:30 pm)	Mon, 21 Apr by 20:15 (8:15 pm)	Sat, 26 Apr by 23:30 (11:30 pm)	Mon, 28 Apr by 20:15 (8:15 pm)	Wed, 7 May by 21:15 (9:15 pm) **In Class**
	Tue	22 Apr						
	Wed	**23 Apr**						
	Thu	24 Apr			*Last Day to Drop a Class*			
	Fri	25 Apr			**In Class**		**In Class**	
15	**Mon**	**28 Apr**	• Polar Plane • Complex Plane and Forms of Complex Numbers	Thu, 1 May by 23:30 (11:30 pm)	Wed, 30 Apr by 20:15 (8:15 pm) **In Class**	Sat, 3 May by 23:30 (11:30 pm)	Wed, 30 Apr by 20:15 (8:15 pm) **In Class**	Wed, 7 May by 21:15 (9:15 pm) **In Class**
	Tue	29 Apr						
	Wed	**30 Apr**						
	Thu	1 May						
	Fri	2 May						
16	Mon	5 May	*Review for Final Exam*	Wed, 7 May by 23:30 (11:30 pm)	Not due this week	Not due this week	Not due this week	Wed, 7 May by 21:15 (9:15 pm) **In Class**
	Tue	6 May						
	Wed	7 May	**Final Exam at 19:15 (7:15 pm) In Class**					
	Thu	8 May	**Semester Over**					
	Fri	9 May	**Graduation**					