PLANE TRIGONOMERY



KNOWLEDGE IS POWER

Math-1316-601

SUMMER II 2025

Welcome to Plane Trigonometry

Meets on Monday through Thursday at 6:00 p.m. at the Lubbock Downtown Center room B003 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 through Thursdays 3:00 pm - 3:55 pm

or **by appointment** (scan QR code or use the link to make an appointment) <u>Schedule an appointment</u>



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

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DR. HP

CONTENTS

What will we learn in this class?



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How do we pass this class?

What resources do we have to be successful?

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What are we required to do for this class?

Our classroom is hybrid. This means the questions, exams, and lecture (as much as possible) is completed inside of class. While lecture completion, practice, and other assignments occur outside of class.

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.

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



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What are the assignments for this class?

Lecture Notes (Worth 2 points each)

Each lecture 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 eight (8) notes, without any extra credit. Any missed lecture notes will not be allowed to be taken after the due date.

Mastery Assessments (Worth 2 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 on Blackboard with Honorlock proctoring and submitted to Gradescope. There will be eight (8) assessments, without any extra credit. Any missed Mastery Assessment will not be allowed to be taken after the due date.

Learning Reflections (Worth 2 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 four (4) assignments, without any extra credit. Any missed Learning Reflection will not be allowed to be taken after the due date.

Unit Exams (Worth 8 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 20 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
- Lecture Notes: 16 points
- Mastery Assessments: 16 points
- Learning Reflections: 8 points
- Unit Exams: 40 points
- Final Exam: 20 points



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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.

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)

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WEB & EMAIL

I Will



Check my messages regularly during weekdays before 4:00 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

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.

Days	Suggested Schedule Actions
Sunday	Practice skills covered in previous week's material or prepare for the next week
Monday	Attend class, practice skills covered in week's material, and take assessments
Tuesday	Attend class, practice skills covered in week's material, and take assessments
Wednesday	Attend class, practice skills covered in week's material, and take assessments
Thursday	Attend class, practice skills covered in week's material, and take assessments
Friday - Saturday	Practice skills covered in current 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

TIPS FOR SUCCESS

- Avoid distractions (cell phone, social media, games, television, or open tabs and windows on your device) when watching and working through lecture videos
- Use the resources (notes, extra videos on Blackboard, free tutoring through the college, each other, and myself) available to you
- Don't hesitate to ask for help and always communicate
- Be sure to complete the assigned work
- Read the feedback given to you on graded work to improve your skills
- Save all of your notes and work

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.p hp or this QR Code.

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SPC Policies

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

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



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



Health & Wellness

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T 🕺 T 🕂 🖌 🖪	✓ Counseling @ SPC	1
·+ ·_ + · · · · 🖪	✓ Student Health	1
. 🕈 . 🕓	✓ Disability Services	۹.
	✓ Drug & Alcohol Prevention	۹.
·* 4월 · 한국 · · · · · · · · · · · · · · · · ·	✓ Title IX Pregnancy	٩.
· · · • • • • • • • • • • • • • • • • •	Emergency Resources	٩.
+	✓ Texan Food Pantry	٩.
	✓ COVID Response	•
	First Step/Non-Traditional Student Scholarship Application	•

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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.

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Summer 2 2025 MATH-1316 Tentative Calendar

Week	Day	Date		Торіс	Lecture Notes Due	Mastery Assessment Due	Learning Reflections	Exam Due		
0	Thu Fri	3 Jul 4	•	Class Introduction Algebra Review	Not due this week	Not due this week	Not due this week	Thursday, 10 July		
	Mon	Jul 7 Jul	•	Angles Non-Acute Angles	Not due today	Not due today	Monday, 14 July	Thursday, 10 July		
1	Tue	8 Jul	•	Trigonometric Functions	Over 7 July Tue, 8 July	Over 7 July Tue, 8 July	Monday, 14 July	Thursday, 10 July		
I	Wed	9 Jul	•	Non-Standard Position Angles	Over 8 July Wed, 9 July	Over 8 July Wed, 9 July	Monday, 14 July	Thursday, 10 July		
	Thu	10 Jul		Unit 1 Exam						
	Mon	14 Jul	• • •	Using a Calculator Solving Right Triangles Law of Sines Law of Cosines	Not due today	Not due today	Monday, 21 July	Wednesday, 16 July		
2	Tue	15 Jul	•	Triangle Applications Radian Applications	Over, 14 July Tue, 15 July	Over, 14 July Tue, 15 July	Monday, 21 July	Wednesday, 16 July		
	Wed	16 Jul			Unit 2	Exam				
	Thu	17 Jul	•	Characteristics of Trigonometric Functions Sine and Cosine Graphs	Not due today	Not due today	Monday, 21 July	Tuesday, 22 July		
	Mon	21 Jul	•	Secant and Cosecant Graphs Tangent and Cotangent Graphs	Over, 17 July Mon, 21 July	Over, 17 July Mon, 21 July	Monday, 28 July	Tuesday, 22 July		
3	Tue	22 Jul		Unit 3 Exam						
Ū	Wed	23 Jul	•	Fundamental Identities Simplifying Trigonometric Identities	Not due today	Not due today	Monday, 28 July	Tuesday, 29 July		
	Thu	24 Jul	•	Verifying Trigonometric Identities	Over, 23 July Thu, 24 July	Over, 23 July Thu, 24 July	Monday, 28 July	Tuesday, 29 July		
	Mon	28 Jul	•	Inverse Trigonometric Functions Solving Trigonometric Equations with Single Angles	Over, 24 July Mon, 28 July	Over, 24 July Mon, 28 July	Monday, 4 August	Tuesday, 29 July		
	Tue	29 Jul		Unit 4 Exam						
4	Wed	30 Jul	•	Sum and Difference Identities Double-Angle Identities	Not due today	Not due today	Monday, 4 August	Monday, 4 August		
	Thu	31 Jul	•	Half-Angle and Power- Reducing Identities Sum-to-Product and Product-to-Sum Identities Solving Trigonometric Equations with Multiple Angles	Over, 30 July Thu, 31 July	Over, 30 July Thu, 31 July	Monday, 4 August	Monday, 4 August		
5	Mon	4 Aug		Unit 5 Exam						



Tue	5 Aug	Vectors and Dot ProductVector Applications	Not due today	Not due today	Not due this week	Thursday, 7 August	
Wed	6 Aug	 Polar Plane Complex Plane and Forms of Complex Numbers 	Over, 5 Aug Wed, 6 Aug	Over, 5 Aug Wed, 6 Aug	Not due this week	Thursday, 7 August	
Thu	7 Aug	Final Exam					