

South Plains College Department of Mathematics and Engineering

Math 1316.003: Trigonometry

MW 9:30 – 10:45 Math 123

Spring 2019 Course Syllabus

Instructor: Jennifer K Bartlett

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Office Hours (Levelland Campus):

MW 11:00– 1:30, F 9:00– 12:00, or by appointment

Course Description: MATH 1316 – Trigonometry (3:3:0) Topics will include trigonometric functions, radian measure, logarithms, oblique triangles, functions of composite angles, trigonometric identities and equations, and inverse trigonometric functions.

Semester Hours: 3 Lecture Hours: 3 Lab Hours: 0 Pre-requisite: MATH 1314 or two units of high school algebra.

Student Learning Outcomes:

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.

General Education Core Objectives:

1. **Communication Skills:** effective development, interpretation, and expression of ideas through written, oral, and visual communication.
 - Develop, interpret, and express ideas through written communication
 - Develop, interpret, and express ideas through oral communication
 - Develop, interpret, and express ideas through visual communication
2. **Critical Thinking:** creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.
 - Generate and communicate ideas by combining, changing, and reapplying existing information
 - Gather and assess information relevant to a question
 - Analyze, evaluate, and synthesize information
3. **Empirical and Quantitative Competency Skills:** the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
 - Manipulate and analyze numerical data and arrive at an informed conclusion
 - Manipulate and analyze observable facts and arrive at an informed conclusion

Course Materials:

- Textbook: *Trigonometry*, by Dugopolski, 4th Edition, Pearson Education ISBN-10: 0-321-92348-0.
- Calculator: You may use a plain scientific calculator on some homework, quizzes, and exams. You may NOT use a graphing calculator or a calculator on a cell phone on any of the quizzes, exams, or the final exam. You are required to bring your calculator to EVERY class.
- You will need a 3-ring binder (1.5 inch), 4 dividers (Notes, Homework, Quizzes & Labs, Reviews & Exams), notebook paper, graph paper, hole punch, stapler, pencils, and erasers.

Methods of Learning Assessment: Students will be continually assessed throughout the course via in-class group work, questioning, and board work. Other methods of assessment include:

- **Attendance:** Attendance and effort are crucial for success in this course. It is your responsibility to make sure that I have marked you present for each class. Class attendance may be taken at any time during the class period, so please do not arrive late or leave early. Leaving early and being tardy will be considered ½ absence. You may be dropped from this course with a grade of X or F if you are absent four consecutive days or if you accrue five absences for any reason throughout the semester. Absences are not classified as 'excused' or 'unexcused'. If you should incur an absence, please refer to your syllabus, contact the instructor, or contact another student to get the assignment completed BEFORE the next class. Late homework and makeup quizzes are not an option. The last day for student-initiated drops is Thursday, April 25th.

- **Homework:** Homework will be assigned at each class meeting. The homework is not a tool by which I torture you, but rather an opportunity for you to practice the skills presented in class which you will be responsible to demonstrate on a quiz the following class period. If you are interested in passing the class, you will need to do well on the quizzes. To do well on the quizzes, you will need to complete the homework. No late assignments will be accepted. You should show all work when doing homework. Simply writing the problem and the answer is not “doing homework.” Using a solutions manual or an app that shows you the steps, and copying them down is NOT “doing homework.” Remember your effort is key to your success. You have to focus your effort on being able to complete the problems on a quiz/exam without any outside resources. You are responsible for the following homework requirements. Any homework that does not follow the homework requirements will be recorded as a grade of a zero.

Homework Requirements:

- 1) It must be turned in at the beginning of the class period. Late homework will not be accepted. Late is defined to be: anything turned in after the start of the class period.
- 2) Homework must be written in pencil on white 8.5 x 11 inch paper. It must be neat and legible. I will be the judge as to what is neat. Just because you can read it doesn't mean that I can interpret it.
- 3) If you have more than one page to turn in, the pages must be stapled together. Multiple pages that are not stapled or held together by a paperclip, folded corner, spit, gum, etc. will not be accepted and be recorded with a grade of zero. You must staple multiple pages together.
- 4) Homework must be presented in an orderly manner with the problem running in a single or double column down the page. No more than double column work will be graded.
- 5) All final answers must be circled to receive credit. Any algebraic answer not circled or “boxed” in will not be graded. Pictures/graphs do not need to be circled or boxed.

- **Notebook:** You will be required to keep all class materials (notes, handouts, homework, quizzes, exams, etc.) organized in a notebook (3-ring binder). These materials are subject to be turned in for grading at any time. Please make certain all materials accompany you to each class meeting. The notebook will have 4 dividers labeled the following: Notes, Homework, Quizzes & Labs, and Reviews & Exams. You will keep the corresponding material under the matching divider.
- **Quizzes:** Short, in-class quizzes that will be given regularly will have problems selected from, or closely related to, your homework. Most, if not all, quizzes will be pop-quizzes so you will need to be prepared every class period. Students arriving late may be denied the chance to take a quiz, if there is one that day. Quizzes must be taken in pencil.
- **Exams:** Exams must be taken in pencil. Student may not leave the examination room for any reason without turning in their exam for grading. The tentative exam dates are as follows:
 - Exam 1: Wednesday, February 6th
 - Exam 2: Wednesday, March 6th
 - Exam 3: Monday, April 8th
 - Exam 4: Monday, April 29th
- **Final:** The comprehensive final will be given on Wednesday, May 8th from 8:00 – 10:00 as directed by the official South Plains College Schedule. No make-up final will be given. The final will cover all material covered in-class.
- **Make-up:** Make-up work is given at the discretion of the instructor. NO make-up quizzes or tests are given without prior notification AND proper documentation. If are absent from class, have given prior notification and proper documentation of your absence, you MUST make arrangements to take the quiz or test BEFORE the next class period. Students who do not take quizzes or exams in-class, early or late, forfeit the right to attempt any extra credit on that quiz or exam.

Grading Policy:

Daily Work (HW, quizzes, labs, etc.)	16%
Exams (4 total)	16% each (total of 64%)
Comprehensive Final	20%

Grading Scale:

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

This course and its grade will be recorded on your official transcript. Grades will be posted on Blackboard during the semester usually after exams.

Student Responsibilities and Expectations:

1. Come to class on time and prepared to learn. (Pencils, homework, notebook, calculator)
2. Read the syllabus.
3. Take notes, participate in class, and complete course assignments early enough to seek help if needed.
4. Food and drink are not allowed in class, with the exception of bottled water.
5. Cell phones and any other electronic devices must be silenced and put away before entering the classroom. Use of these devices during class will result in a zero for that day's quiz, homework, or exam.

Resources:

- I am your first and BEST resource for this class! Feel free to come by during my office hours or email me at jkbartlett@southplainscollege.edu.
- Blackboard is the online course management system that will be used for this course. The course syllabus as well as any other class handouts can be accessed through Blackboard. Login at <http://southplainscollege.blackboard.com>. The user name and password should be the same as the MySPC and SPC email.
User name: first initial, last name, and last 4 digits of the Student ID
Password: Original Campus Connect Pin No. (found on SPC acceptance letter)
- Free tutoring is available in M116 on the Levelland campus. Hours for the tutors will be posted by the door of M116.
- Form study groups: Networking is an essential tool both in the classroom and in the workforce!
- Your book that you have already purchased
- Websites that contain helpful videos:
patrickjmt.com
khanacademy.com

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland Student Health & Wellness Center 806-716-2577, Reese Center (also covers ATC) Building 8: 806-716-4675, Plainview Center Main Office: 806-716-4302 or 806-296-9611, or the Health and Wellness main number at 806-716-2529.

Religious Holy Days: In accordance with Section 51.911, Texas Education Code, South Plains College will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within seven (7) calendar days after the absence. Students are required to file a written notification of absence with each instructor within the first fifteen (15) days of the semester in which the absence will occur. Forms for this purpose are available in the Student Services Office along with instructions and procedures. "Religious holy days" means a holy day observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code. (copied from current South Plains College catalog)

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Non-Discrimination Statement: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the SPC policy at: (http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

Sexual Misconduct Statement: As a faculty member, I am deeply invested in the well-being of each student I teach. I am here to assist you with your work in this course. If you come to me with other non-course-related concerns, I will do my best to help. It is important for you to know that all faculty members are mandated reporters of any incidents of sexual misconduct. That means that I cannot keep information about sexual misconduct confidential if you share that information with me. Crystal Gilster, the Director of Health & Wellness, can advise you confidentially as can any counselor in the Health & Wellness Center. They can also help you access other resources on campus and in the local community. You can reach Ms. Gilster at 806-716-2362 or email cgilster@southplainscollege.edu or go by the Health and Wellness Center for assistance. You can schedule an appointment with a counselor by calling 716-2529.

4.1.1.4 Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact Crystal Gilster, Director of Health and Wellness at 806-716-2362 or email cgilster@southplainscollege.edu for assistance.

Trigonometry Tentative Course Outline
 Math 1316.003 MW 9:30-10:45
 Spring 2019

Wk	Day	Date	Topic	Due	Tentative Assignment
1	Mon	Jan 14	Syllabus 1.1 Angles and Degree Measure		p. 51 11-103 odd & 108
	Wed	Jan 16	1.2 Radian Measure, Arc Length, Area	HW	p. 60 5-101 odd omit 103, 107
2	Mon	Jan 21	<i>MLK Holiday – No Class</i>		
	Wed	Jan 23	1.4 The Trig Functions	HW, Rev 1	p. 78 5-57, 83-95 odd omit 89
3	Mon	Jan 28	1.5 Right Triangle Trigonometry	HW, Rev 2	p. 78 63-81, p. 89 7-37 odd
	Wed	Jan 30	1.6 Fundamental Identities and Reference Angles	HW	p. 102 3-53 odd, Exam 1 Review
4	Mon	Feb 4	1.3 Angular and Linear Velocity and Review Questions	HW	p. 68 5-43 odd & 47
	Wed	Feb 6	Exam 1 (16%) Binder Check	E1 Rev in NB	
5	Mon	Feb 11	3.1 Basic Identities	Rev 3	p. 167 1-73 odd
	Wed	Feb 13	3.2 Verifying Identities	HW	p. 175 5-73 odd
6	Mon	Feb 18	3.2 Verifying Identities	HW, Rev 4	worksheet
	Wed	Feb 20	3.3 Sum/Difference Identities for Cosine	HW	p. 182 5-89 odd, worksheet
7	Mon	Feb 25	3.4 Sum/Difference Identities for Sine and Tangent	HW, Rev 5	p. 188 1-55 odd, worksheet
	Wed	Feb 27	3.5 Double and Half Angle Identities	HW	p. 196 1-61 odd, worksheet
8	Mon	Mar 4	Review	HW, Rev 6	Exam 2 Review
	Wed	Mar 6	Exam 2 (16%) Binder Check	E2 Rev in NB	
	Mon-Fri	Mar 11-Mar 15	<i>Spring Break</i>		
9	Mon	Mar 18	2.1 The Unit Circle and Graphing 2.2 Basic Sine Wave	Rev 7	p. 119 71-89 odd p. 129 11-27 odd
	Wed	Mar 20	2.3 Graphs of Secant and Cosecant 2.4 Graphs of Tangent and Cotangent	HW	p. 138 33-53 odd p. 146 35-51 odd
10	Mon	Mar 25	4.2 Sine, Cosine and Tangent Equations	HW, Rev 8	p. 235 3-61 odd
	Wed	Mar 27	4.3 Equations Involving Compositions	HW	p. 242 1-79 odd
11	Mon	Apr 1	4.4 Trig Equations of Quadratic Type	HW, Rev 9	p. 250 1-83 odd omit 63
	Wed	Apr 3	Review	HW	
12	Mon	Apr 8	Exam 3 (16%) Binder Check	E3 Rev in NB	
	Wed	Apr 10	5.1 Law of Sines		p. 265 5-29 odd & 33
13	Mon	Apr 15	5.2 Law of Cosines 5.3 Area of a Triangle	HW, Rev 10	p. 274 5-17 odd & 30 p. 281 3-25 odd
	Wed	Apr 17	5.4 Vectors 5.5 Vector Applications	HW, Rev 11	p. 292 9-85 odd p. 301 1-19 odd
14	Mon	Apr 22	<i>Easter Holiday – No Class</i>		
	Wed	Apr 24	Review	HW	
	Thurs	Apr 25	<i>Last Day to Drop</i>		
15	Mon	Apr 29	Exam 4 (16%) Binder Check	E4 Rev in NB	
	Wed	May 1	Comprehensive Review		
16	Mon	May 6	No Class – Finals Week		
	Wed	May 8	Final Exam (20%) 8:00-10:00		