

Math 1060-02 (#40112)

Trigonometry (3)

Fall 2015 (Monday, 24 August – Friday, 11 December 2015)

TH 4:00-5:14 PM

SNOW 147

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Instructor: Dr. Brent D. Albrecht

Office: SNOW 137

Office Hours: MW 1:00-1:50 PM

& By Appointment

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Prerequisites: Math 1050 Grade of C or Higher, ACT Math Score of 25 or Higher, or Placement Test.

Course Description: Fulfills General Education Mathematics requirement. Continuation of Math 1050. Explores trigonometry and its applications, analytic geometry including conic sections, systems of equations and inequalities, and partial fractions. Also introduces discrete algebra including sequences, series, and the binomial theorem. Required for Utah Level 2 and Level 3 Math Endorsements. Satisfies the Mathematics prerequisite for Math 1210 (together with Math 1050) as well as the Mathematics prerequisite for Phys 2010.

Objectives: To convey to the students the beauty and utility of mathematics, and to illustrate some of its applications in modern society.

To convey, to the extent possible using the content of this course, the quantitative literacy skill set adopted by Dixie State University:

All mathematics courses at Dixie State University support the general education goal of the university, and will require students to:

1. Employ mathematical techniques in solving computational problems.
2. Interpret mathematical models.
3. Construct quantitative and logical arguments.
4. Apply mathematical knowledge to solve real-world problems.
5. Communicate in the mathematical language through the proper use of notation and terminology.
6. Explore and analyze mathematical concepts, using technology to the appropriate extent.

Upon successful completion of this course, the students will demonstrate through testing the ability to:

1. Use the properties of trigonometric functions to solve problems.
2. Express angle measurements, both in radians and in degrees/minutes/seconds.
3. Visualize trigonometric and inverse trigonometric functions.
4. Determine the period of a given trigonometric function.
5. Evaluate trigonometric and inverse trigonometric functions.
6. Prove trigonometric identities.
7. Find solutions to trigonometric equations.
8. Solve right and oblique triangles.
9. Graph conic sections.

“Philosophy is written in this grand book – the Universe – which stands continually open to our gaze, but it cannot be understood unless one first learns to comprehend the language and interpret the characters in which it is written. It is written in the language of mathematics, and its characters are triangles, circles, and other geometrical figures, without which it is humanly impossible to understand a single word of it.”

- Galileo Galilei

Text: Trigonometry: A Unit Circle Approach, 9<sup>th</sup> Ed. by Michael Sullivan.

Attendance: It is essential that students attend class, and roll is taken on randomly selected days in order to ensure student attendance. Tardiness is strongly discouraged. Attendance records may be used in determining borderline grades. Absences due to university-sponsored activities are handled as stated in Dixie State University Policy #5-23 (located at <http://www.dixie.edu/humanres/policy/sec5/523.html>).

Homework: Although this section is taught in a traditional lecture format, it also includes an extensive computer-based component. In particular, all homework assignments are to be completed online through Pearson’s MyMathLab (located at <http://www.mymathlab.com/>). Students must purchase access to the MyMathLab educational environment (which includes access to an electronic version of the required course text) and must also have access to a computer with an internet connection on a daily basis. Access codes for Pearson’s MyMathLab are available for purchase at the Dixie State University Bookstore (located on the second floor of the Gardner Center). Computer facilities designated for student use are available throughout campus. The course identification number is ***albrecht42555***. If desired, students may also purchase a loose-leaf version of the text by visiting Pearson’s online store at <http://www.mypearsonstore.com/bookstore/trigonometry-a-unit-circle-approach-books-a-la-carte-0321717104>.

Exams: While students may review for exams from within Pearson’s MyMathLab online learning environment, all actual exams (including the final exam) are administered in person either during class or in the Dixie State University Testing Center (located in the North Plaza Building). There will be five midterm exams and one comprehensive final exam. Exams are administered according to the following (tentative) schedule:

Midterm I: 4:00-5:14 PM on Thursday, 10 September 2015  
 Midterm II: 4:00-5:14 PM on Thursday, 1 October 2015  
 Midterm III: 4:00-5:14 PM on Tuesday, 20 October 2015  
 Midterm IV: 4:00-5:14 PM on Tuesday, 10 November 2015  
 Midterm V: 4:00-5:14 PM on Tuesday, 1 December 2015  
 Final: 3:30-5:30 PM on Tuesday, 15 December 2015

Make-up exams are given only in extenuating circumstances, and only if prior arrangements are made. The instructor reserves the right to make evaluations on a case-by-case basis. At the discretion of the instructor, students' lowest nonzero midterm exam scores may be replaced by their final exam scores.

Grading:	Homework	20%	94 – 100%	A
	Midterm I	12%	90 – 93%	A-
	Midterm II	12%	87 – 89%	B+
	Midterm III	12%	83 – 86%	B
	Midterm IV	12%	80 – 82%	B-
	Midterm V	12%	75 – 79%	C+
	Final	20%	70 – 74%	C
			65 – 69%	C-
			60 – 64%	D+
			55 – 59%	D
		50 – 54%	D-	
		0 – 49%	F	

Academic Integrity: Students are expected to uphold the highest standards of academic integrity. Section 4, Article XI of Dixie State University Policy #5-33 (located at <http://www.dixie.edu/humanres/policy/sec5/533.html>) outlines the standards of student academic conduct. While students are encouraged to collaborate on homework assignments, their submitted work should accurately reflect the results of their individual efforts. Students must do their own work during exams. Talking, having discussions, comparing papers, copying, and collaborating are not allowed on exams. The use of notes, unapproved calculators, and communication devices such as cell phones is also prohibited during exams. Academic dishonesty will result in the failure of written work and may lead to failure of the course and/or university disciplinary action.

Classroom Etiquette: Students are responsible for helping to maintain a respectful classroom learning environment. Academic discipline for instances of disruptive behavior are handled as stated in Dixie State University Policy #5-33 (located at <http://www.dixie.edu/humanres/policy/sec5/533.html>).

Title IX Statement: DSU seeks to provide an environment that is free of bias, discrimination, and harassment. Any member of the campus community who has been the victim of sexual harassment/misconduct/assault is encouraged to make a report to the university's Title IX Director, Cindy Cole. Students may call Cindy at (435) 652-7731 or send an email to [cindy.cole@dixie.edu](mailto:cindy.cole@dixie.edu).

Faculty members are required to notify the Title IX Director of the basic facts of any incident reported to them.

**Accommodations:** Any student seeking accommodations or services due to a disability must contact the Disability Resource Center (located in the North Plaza Building). Students may call the center at (435) 652-7516 or send an email to [drc@dixie.edu](mailto:drc@dixie.edu). The Disability Resource Center determines eligibility for and authorizes the provision of accommodations and services. The center can arrange to provide materials (including this syllabus) in alternate formats if necessary.

**Dmail:** Important class and university information is sent to students' Dmail accounts. All Dixie State University students are automatically assigned a Dmail account. Students are responsible for knowing the information sent to their Dmail accounts.

**Class Schedule:** The Dixie State University Fall 2015 Semester Schedule is located online at <http://new.dixie.edu/reg/?page=fall2015>. The (tentative) schedule for the class is as follows:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
August 24	25 2.1 & 2.2	26	27 2.2 & 2.3	28
31	September 1 2.4 & 2.5	2	3 2.5 & 2.6	4
7 <i>Labor Day No Class</i>	8 Review	9	10 <b>Midterm I</b>	11
14	15 3.1 & 3.2	16	17 3.2 & 3.3	18
21	22 3.4 & 3.5	23	24 3.5 & 3.6	25
28	29 3.7 & Review	30	October 1 <b>Midterm II</b>	2

5	6 4.1 & 4.2	7	8 4.2 & 4.3	9
12	13 4.4 & Review	14	15 <i>Semester Break No Class</i>	16 <i>Semester Break No Class</i>
19	20 <b>Midterm III</b>	21	22 5.1 & 5.2	23
26	27 5.2 & 5.3	28	29 5.4 & 5.5	30
November 2	3 5.5 & 5.6	4	5 5.7 & Review	6
9	10 <b>Midterm IV</b>	11	12 6.2 & 6.3	13
16	17 6.3 & 6.4	18	19 6.6 & 6.7	20
23	24 6.7 & Review	25 <i>Thanksgiving No Class</i>	26 <i>Thanksgiving No Class</i>	27 <i>Thanksgiving No Class</i>
30	December 1 <b>Midterm V</b>	2	3 Final Review	4
7	8 Final Review	9	10 Final Review	11
14	15 <b>Final Exam 3:30-5:30 PM</b>	16	17	18