Trigonometry 1060, SPRING 2019

Instructor: Seungsu Lee
Office Location: JWB 311
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Office Hours: Monday and Wednesday 09:30 – 10:30 at JWB 311 and 1 hour (TBA) at the math tutoring center.
TA: Corbin Class, Corbin.class@utah.edu

Course Goal: Improve quantitative reasoning and prepare for future math learning in calculus, linear algebra, and discrete mathematics.

Topics to be covered: Trigonometry, Topics in Analytic Geometry, and the Complex Numbers.

Expected Learning Outcomes:
1 Understand trigonometric function definitions in the context of the right triangles and on the unit circle.
2 Graph basic trigonometric functions and those with basic transformations. Be able to write an equation given a graph. Identify amplitude, periods, phase shifts from graphic and algebraic representations of functions.
3 Solve applications problems using principles in trigonometry.
4 Represent and interpret "real world" contexts situations using radian trigonometric functions.
5 Use trigonometric inverses correctly, understanding the domain/range restrictions.
6 Verify trigonometric identities, using proper logic and use trigonometric identities to evaluate expressions.
7 Solve trigonometric equations.
8 Solve for all measurements in any triangle, using the Pythagorean Theorem, trigonometric functions, the Law of Sines, and Law of Cosines in a variety of contexts and applications.
9 Be able to convert to and from rectangular and trigonometric-form coordinates (polar coordinates).
10 Graph complex numbers in a plane, perform operations on such numbers and use DeMoivre's theorem to find roots and powers of complex numbers.
11 Understand geometry and arithmetic operations with vectors and use vectors in application problems.
12 Use parametric equations in application problems and be able to convert between parametric and non-parametric representation of functions.
13 Understand and explain arithmetic with complex numbers using trigonometry.
14 Write an equation for a conic given a graph of the conic; given an equation of a conic, recognize the conic and be able to graph it.

Text: The text and homework are is available on the course canvas page entirely free. You may print or download any portion of the text, or may view it online.

Homework: All homework is to be completed on MyOpenMath. The link to homework assignments and due dates can be found on the course canvas page. *Late homework will not be accepted*. You will be given ample time to do your assignments, you may ask me, the SI, or TAs questions or you may work with others on assignments. You have unlimited attempts for each prompt. Please note, homework is a substantial part of your grade for the course (15%), it is to your benefit to make success on the assignments a priority—partial credit is better than no credit.

Calculators: Calculators will be useful for homework, but will not be permitted on exams.

Quizzes: There will be approximately 10 quizzes (one each Friday that does not have an exam.) You must be in attendance to take the quiz, however the three lowest quiz scores will be dropped.

Attendance: Like any college course, attendance is not "mandatory." Please note however, that concepts will be thoroughly explained and reviewed in class. Students who regularly attend score on average 30% higher on exams than those who do not.

Important dates:
Class will meet every Monday, Wednesday, and Friday, however, *there will be no class:*
Monday, January 21 (Martin Luther King Day)
Monday – Friday, March 11 – 15 (Fall Break)

MIDTERMS:
Friday, March 1
Friday, April 12

FINAL: MONDAY April 29, 1:00PM – 3:00PM, Location to be announces. (see:
http://registrar.utah.edu/academic-calendars/final-exams-spring.php)

There are no "make-up" exams. Students who miss an exam or quiz will receive a "0" on the missed exam or quiz. The lowest Midterm may be replaced with the Final Exam score, if the Final Exam score is higher.

Semester Grades will be determined using the following weights:
15% homework
15% quizzes
20% 1st midterm
20% 2nd midterm,
30% Final exam
Note: The final will replace the lowest midterm score if the final is higher than the midterm.

Semester letter grades will be converted from numerical semester scores (N) as follows:

$100 \geq N \geq 93$: A	$83 > N \geq 80$:B-	$70 > N \geq 68$:D+
$93 > N \geq 90$:A-	$80 > N \geq 78$:C+	$68 > N \geq 63$:D
$90 > N \geq 88$:B+	$78 > N \geq 73$:C	$63 > N \geq 60$:D-
$88 > N \geq 83$:B	$73 > N \geq 70$:C-	$60 > N$:E

Mathematics Tutoring Center: Drop in, sit down, and if you have a question, someone will come by who can help you. There are also study areas free of tutors, a computer lab, group study rooms available through reservations, and group tutoring sessions that can be arranged to meet at a regular time. Located on 1st Floor of JWB or LCB. Open 8am-8pm MTWH; 8am-6pm F.

Video Lectures: Video lectures are available at:
http://www.math.utah.edu/lectures/math1060New.html