Trigonometry 1060, Summer 2020

Instructor: Sarah Jean Hoggan, MEd
Contact: hoggan@math.utah.edu
Office Hours: Before or after class by appointment

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 application problems using principles in Trigonometry.
4. Represent and interpret "real world" context 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. 14Write 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 (entirely free) are available on the course canvas page. You may print or download any portion of the text, or may view it online.

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

Homework: All homework is to be completed on IMathAS. 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 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.

Quizzes: There will be approximately 5 quizzes (one each Thursday). The two lowest quiz scores will be dropped.

Attendance: There are only 10 classes plus the final exam. 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 Tuesday and Thursday for five weeks from 6:00 – 9:30 pm.

MIDTERM: Tuesday, June 2

FINAL: TUESDAY, June 16 at 6:00PM.

There are no "make-up" exams. Students who miss an exam or quiz will receive a "0" on the missed exam or quiz. The 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
30% midterm
40% 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 $93 > N \geq 90$:A- $90 > N \geq 88$:B+ $88 > N \geq 83$:B $83 > N \geq 80$:B- $80 > N \geq 78$:C+
$78 > N \geq 73$:C $73 > N \geq 70$:C- $70 > N \geq 68$:D+ $68 > N \geq 63$:D $63 > N \geq 60$:D- $60 > N$:E

Additional Resources:

Mathematics Tutoring Center: 'Online Tutoring and **Learning Consultations'** are available via the website: www.learningcenter.utah.edu or emailing: learningcenter@utah.edu.

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

ADA: "The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations." The CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

CLASSROOM ETIQUETTE: **Dress -** The educational process is facilitated by professional behavior on the part of all; therefore, students are encouraged to dress appropriately for class. **Turn cell phones off/vibrate during class! DO NOT** go outside in the middle of class to make or answer a phone call unless it is a true emergency. **DO NOT TEXT MESSAGE** during class! During a quiz or exam, if your cellphone rings/vibrates points will be deducted! Do not talk while I am lecturing or while other students are asking questions. DO NOT come to class late or leave early. It is not only inconsiderate, but also quite disruptive to other students.

FACULTY RESPONSIBILITIES: "All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. Students have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content."

UNIVERSITY SAFETY STATEMENT: The university of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585 COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

CRISIS SERVICES CENTER: This center offers services Mo-Fr 8 am – 5 pm. f you would like to talk to one of the staff members, please call 801-581-6826 or walk into the Center at 426 Student Services Building (SSB). For more urgent situations and after hours, please go to the University Neuropsychiatric Institute (UNI), 501 Chipeta Way, or go to the Emergency Department at the University Hospital.

UNI CRISIS LINE: 801-587-3000 offers crisis response 24/7, including: crisis support over the phone, a mobile outreach option (MCOT) that will respond to persons in their home, and the Receiving Center where individuals from Salt Lake County can access a safe and supportive environment to help individuals work through their crisis situation. Individuals may spend up to 23 hours at the Receiving Center, at no cost.

SEXUAL MISCONDUCT: Title IX makes it clear that violence and harassment based on sex and gender (which Includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066.

For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776.

To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

STUDENT NAMES AND PERSONAL PRONOUNS STATEMENT: Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your UID card, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email bpeacock@sa.utah.edu to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

WELLNESS STATEMENT: Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.