Trigonometry 1060, FALL 2019

Instructor Name: Dihan Dai
Class Time and Place: 11:50AM-12:40PM
Mondays, Wednesdays and Fridays
in AEB 320

Office location: JWB 332
Office Hours: TBD
Contact: dai@math.utah.edu (You can contact me either via email or Canvas message. And as long as your questions are course/math related, I will be happy to answer them.)

Canvas: We will use Canvas in place of class webpage.

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 is available on the course canvas page. You may print or download any portion you would like, or may view it entirely online. Homework is also entirely available on the course

Canvas page.

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

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 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 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.

Classes will meet every Monday, Wednesday, and Friday with the exception of Labor Day (Sept. 2) and Fall Break.

There will be no class:
Monday, September 2 (Labor Day. Day)
Monday – Friday, October 7 – 11 (Fall Break)
Thursday - Friday, November 28 - 29 (Thanksgiving Break)

MIDTERMS:
Friday, October 4
Friday, November 22

FINAL:
MONDAY, December 9, 1:00 – 3:00 (see
https://registrar.utah.edu/academic-calendars/final-exams-fall.php
). The location will be announced in class.

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 (*There will be a quiz every Friday except the first Friday of the semester and on midterm days, the three lowest quiz scores will be dropped*)
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 ≥ N ≥ 93: A	83>N≥80:B−	70>N≥68:D+
93>N≥90:A−	80>N≥78:C+	68>N≥63:D
90>N≥88:B+	78>N≥73:C	63>N≥60:D−
88>N≥83:B	73>N≥70:C−	6o>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/

ADA Statement:

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 this class, reasonable prior notice needs to be given to the Center for Disability and Access, 162 Olpin Union Building, 801-581-5020. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability and Access.

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 www.safeu.utah.edu

Student Responsibilities:

All students are expected to maintain professional behavior in the   classroom setting, according to the Student Code, spelled out in the Student Handbook. You 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, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee.

Addressing 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).

Official Dates:
The last day to drop classes is Friday, August 30; the last day to withdraw from this class is Friday, October 18. Please check the academic calendar for more information pertaining to dropping and withdrawing from a course. Withdrawing from a course and other matters of registration are the student's responsibility.

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.

Classroom Social Equity:
I strive to be ethical, kind, fair, inclusive and respectful in my classroom and expect students to behave likewise. In this regard, I have these requests of you, my student:

1. Please do tell me, discreetly, if you have any sort of anxiety disorder, TBI, PTSD, C-PTSD, or any other challenge that would cause psychological harm to you by me calling on you in class. I want students to feel a little uncomfortable and stretched during class, while working on problems as a large group, but I definitely don't want to cause any human being harm. So, please just tell me if that is the case for you and I will confidentially accommodate your request.
2. If your preferred name is different than your legal first name (the preferred name you chose does indeed show up in CIS on my roll sheet, but not yet in Canvas), please log into Canvas and go to Account (on far left)-->Settings and change your Display Name to be the name you prefer to be addressed by.

This will help me greatly to know students' names, and to address you correctly when responding to Canvas quiz comments.

3. If there is ever a time that you feel this course or the curriculum is not equitable, please email me or meet with me to discuss your concerns so we have a chance to address that.

Additional Policies:

1. Laptop is NOT allowed in class. At this point, it's almost impossible to take notes for a math class on a laptop in real time. Thus, it is unnecessary in class. If you are using a tablet or ipad or some similar device to take notes and the screen lies parallel to your desk, that is totally fine.

2. If you have emergent, extenuating circumstance that makes it necessary to take an alternate exam, it is your responsibility to discuss that with me, before the exam occurs, or as soon as possible. In general, I allow exams to be taken early, but not late.

3. If you have crisis-level extenuating circumstances which affect your class performance and you need guidance/advice/flexibility, please communicate with me as soon as possible so I can help you in some manner, which I am truly happy to do. The longer you wait to communicate with me, the less I can and am willing to do to help.

4. I will kindly demand respectful behavior in my classroom. Examples of disrespect include, but are not limited to, reading a newspaper or magazine in class, social chatting with your friend in class, text-messaging during class, excessive use of your cell phone, or cuddling someone else in class. If you choose to be disrespectful with distracting behavior during our class, please keep in mind that you put me in a position of choosing between protecting/taking a stand for you OR for the other students or myself whom you are disrupting. I can guarantee I will choose to stand for the students who are there to learn without disruptions and I will thus take action to terminate your distracting behavior, and that action may not be desirable for you.

5. There shall be no cursing nor negative ranting (for example, "math sucks") on any written work turned in. The penalty for such things on your written work will be a zero score on that assignment or test.

6. If you have questions about any exam/assignment grade, or you want to appeal the grading of the exam/assignment, you must bring it to me within one week of the exam/assignment being turned back in class. I'm happy to look over your appeal and/or questions and give my feedback in order to benefit your learning. But, it must be done in this timeframe of two weeks from when I hand back the exam/assignment.

7. If you cheat on any homework, project, quiz or exam, I will automatically give you a zero for that grade. Depending on the severity of the cheating, I may decide to fail you from the class. Please note that the use (or even just pulling it out of your pocket) of a cell phone or any other electronic device during any in-class quiz or exam is considered cheating and cause for receiving an automatic zero. Also, if you exhibit any other behaviors that are

unethical, like offering me a bribe to give you a better grade (even if you later claim you were joking), I will report your behavior to the Dean of Students.

8. Please make sure you do your best throughout the semester, knowing the grading scheme and what's expected of you, and come talk to me if you need further study strategies. I will be happy to brainstorm ideas to help you maximize your study strategies and improve your mathematical understanding.

I reserve the right to change my policies stated in this syllabus at some point in the semester. If I do make a change to a policy, I will announce it in class and send the change in email or post an Announcement on Canvas.