

MATH 1060-004: Trigonometry

Fall 2020

INSTRUCTOR INFORMATION:

Instructor: *Jordan Saethre (She/Her/Hers)*

Email: *saethre@math.utah.edu*

Zoom Meeting ID: 959-5616-3645 (password posted on canvas in an announcement)

Accessibility & Support: You may contact me by e-mail or through Canvas-mail. I will regularly check my email during working hours: Monday-Friday from 8:00 am – 5:00 pm. Be aware that if you send me an email outside of these times I won't respond until working hours. Usually I will respond within 24 hours. Announcements will be made in Canvas for anything that pertains to the whole class. It is your responsibility to read announcements to stay informed of what is happening in the class.

COURSE DESCRIPTION

This is a basic course in trigonometry (see detailed learning objectives below for more about content). A letter grade of C or better in Math 1050 is a prerequisite, and a C or better in this course couples with that as a prerequisite for Math 1210. This course fulfills the University QA requirement.

COURSE DETAILS

- **Course Type:** Interactive Video Conferencing (IVC - synchronous online ([click here for definitions](#)))
- **Location & Meeting Times:** Monday, Wednesday, and Friday 09:40 am – 10:30 am on Zoom from Monday August 24, 2020 to Thursday December 3, 2020. (Zoom Meeting ID listed above, password will be posted in an announcement in canvas).
- **Attendance & Punctuality:** Attendance for zoom lectures is not required although strongly encouraged. Lectures will be recorded and posted on canvas (usually) by the end of each day of lecture.
- **COVID-19 Considerations:** Students must self-report if they test positive for COVID-19 via coronavirus.utah.edu.
- **Textbook:** The textbook for this course is integrated into Canvas and provided at no cost.
- **Technical requirements:**
 - At least portions of this course on certain dates and days of the week will be conducted online. You should have access to a sufficiently strong internet connection to support this video conference.
 - Exams will be taken with Zoom proctoring. For this, you will need in addition to the steady internet connection a connected camera (on a smartphone or laptop).
 - Quizzes and exams will be submitted digitally on Gradescope, so some form of digitizing technology will be needed. This could be a scanner or a scanning apps for smartphones. There are many scanning apps available for Android and IOS, some examples are:
https://play.google.com/store/apps/details?id=com.adobe.scan.android&hl=en_US
<https://apps.apple.com/us/app/adobe-scan-digital-pdf-scanner/id1199564834>
- **Syllabus subject to change:** This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas.

COURSE EXPECTED LEARNING OUTCOMES

1. Understand trigonometric function definitions in the context of 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, and asymptotes from graphic and algebraic representations of functions.
3. Represent and solve physical world problems using trigonometric functions.
4. Use trigonometric inverses correctly, understanding the domain/range restrictions.
5. Verify trigonometric identities, using proper logic and use trigonometric identities to evaluate expressions.
6. Solve trigonometric equations.
7. 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.
8. Be able to convert to and from rectangular and trigonometric forms of complex numbers and polar and rectangular forms of coordinates.
9. Graph complex numbers in a plane, perform operations on such numbers and interpret this graphically, and use DeMoivre's theorem to find roots and powers of complex numbers.
10. Understand geometry and arithmetic operations with vectors and use vectors in application problems.
11. Give an equation or verbal description for a conic given a graph of the conic; given an equation of a conic, identify the conic and be able to graph it and describe its attributes.

COURSE DESIGN

This course will be conducted fully online. Lectures will be given during class meeting times listed above via Zoom. Meeting ID posted above. Meeting password will be posted on canvas in an announcement. Attendance for zoom lectures is not required although strongly encouraged. Lectures will be recorded and posted on canvas (usually) by the end of each day of lecture.

Quizzes will be given each week via Gradescope except on weeks that an exam is given. Each quiz will be available from 05:00 am Friday to 12:00 am (midnight) the following Monday each week. Once the quiz is opened a timer will start for 60 minutes. The quiz must be completed and uploaded within that time. If the quiz is opened and then closed it will not be able to be reopened. Students are expected to complete the quiz by themselves.

The 3 midterm exams and the final (4 exams total) will function much in the same fashion as quizzes except that students will be proctored over zoom. Exams will take place on the posted dates below during the usual class meeting time. You are required to take each exam during the time that is given. It is the student's responsibility to be available for these exam dates and accommodations will only be given for rare and extreme circumstances.

Office hours will be held via Zoom in the same zoom meeting used for lecture each Monday and Friday from 11:00 am to 12:00 noon except on days that an exam is held. Office hours are a chance for the student to ask clarifying questions on homework or past quiz problems.

Most of the learning in this course will happen as a student reads the textbook and work through homework problems on their own time. Lectures are designed to introduce and motivate topics and provide examples of some problems that might be encountered in the homework sections, but will not cover every possible situation in every homework section. That said, to have the highest probability of success in this course a student will read the associated sections of the textbook before lecture, attend lecture, ask questions, work through homework problems, and attend office hours to get additional help with the trickier problems.

CLASS SCHEDULE & IMPORTANT DATES

Exam Dates

- Exam 1 – Friday, September 18, 2020
- Exam 2 – Friday, October 16, 2020
- Exam 3 – Friday, November 20, 2020
- Final Exam – (held during final exam period) Monday, December 7, 2020 – Friday, December 11, 2020

Official Drop/Withdraw Dates: The last day to drop classes is Friday, September 4; the last day to withdraw from this class is Friday, October 16. 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.

Holidays: There will be no class on Monday, September 7 (Labor Day) and November 26-29 (Thanksgiving break).

Detailed Schedule is provided at the end of the syllabus.

COMMUNICATION

- All course materials, such as lecture slides, assignments, solutions, grades, etc. will be posted on the Course Canvas site. Class announcements will be done via Canvas. You will be responsible for any information contained in them as well as the information announced in class.
- It is also your responsibility to check your Canvas messages regularly. There will be occasions during the semester that we may need to reach out to you individually (e.g. regarding a grade or assignment) and it is in your best interest to respond promptly.
- Feel free to contact me by email or Canvas message. I will do my best to answer emails promptly. I would like to encourage you to email me only if it is something personal that requires individual attention, if instead you have questions about logistics of the class, course material and assignments, and anything else your classmates may wonder as well, please post a question on the Discussions Board instead. This way the information is shared quickly to the entire class, and each of you can benefit from seeing other classmates' questions.
- I will always do my best to ensure the communication relevant to the course is clear and transparent, it is your responsibility as well to keep yourself updated by regularly checking: the announcements on Canvas, your Umail, the posts on the Discussions Board, and pay attention to the announcements given in class and Discussion Section.
- The online homework system includes an "Ask" feature that may also be used to communicate with me.
- Students are expected to log in and check canvas every day for posted announcements and assignments. Students are also strongly advised to set up notifications for canvas so they do not miss any important notifications.

EXPECTATIONS FOR ONLINE LEARNING ENVIRONMENT

- Classroom equivalency: Respectful participation in all aspects of the course will make our time together productive and engaging. Zoom lectures, discussion threads, emails and canvas are all considered equivalent to classrooms and student behavior within those environments shall conform to the student code. Specifically:
 - Posting photos or comments that would be off-topic in a classroom are still off-topic in an online posting.
 - Disrespectful language and photos are never appropriate.
 - Using angry or abusive language is not acceptable, and will be dealt with according to the Student Code. The instructor may remove online postings that are inappropriate.
 - Do not use ALL CAPS, except for titles, or overuse certain punctuation marks such as exclamation points and question marks.
 - Course e-mails, e-journals, and other online course communications are part of the classroom and as such, are University property and subject to the Student Code. Privacy regarding these communications between correspondents must not be assumed and should be mutually agreed upon in advance, in writing.
- Other expectations for online communication (on Discussion Board, Emails, Zoom chat etc):
 - Treat your instructor, teaching team and classmates with respect in email or any other communication.
 - Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
 - Avoid slang terms such as “wassup?” and texting abbreviations such as “u” instead of “you.”
 - Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or be offensive to others.
 - Be careful with personal information (both yours and others).
- Online submissions: You are responsible for submitting the assignment with the required naming convention, correct file extension, and using the software type and version required for the assignment.

ASSIGNMENTS, ASSESSMENT & GRADING

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		

The numerical grade consists of several components:

- **Homework:** (17%) Homework is delivered online through the iMathAS system. These homeworks will be linked through Canvas and are fully online (no file uploads needed). If you think you have caught a mistake in the online homeworks, email me with an explanation of what you think is wrong.
- **Quizzes:** (13%) There will be weekly quizzes delivered through Gradescope and submitted via file upload. There are 10 quizzes in total, which must be submitted within a given time window. The two lowest quiz scores will be dropped. Quizzes may not be retaken. 3% of this grade is a mandatory quiz on the syllabus that will take place during the first week.

- **Exams:** (60%) There will be three exams delivered in Gradescope and submitted via file upload. Exams will be longer than quizzes. Each exam counts for 20% of your final grade.
- **Final Exam:** (10%) The final exam will offer an opportunity to show mastery of topics after the time they were covered in the course. It is worth only a small portion of your final grade, but if mastery of topics is shown on the final (by scoring higher on the final than the second lowest midterm score), the final exam grade will also replace the second lowest midterm score (the lowest midterm score is dropped).

It is the student's responsibility to ensure the accuracy of all recorded homework, quizzes, online assignments, and exam grades. Also you should keep as record all your graded assignments. If you see any error in your grades on Canvas, reach out to the instructor as soon as possible, or at the latest within two weeks from when the assignment was returned.

Incompletes: According to university policy, to be considered for an incomplete, a student must have 20% or less of the course work remaining and be passing the course with a C or better. You must request an incomplete grade and I will consider giving that grade only under exceptional circumstances.

Plagiarism: Students must adhere to the standards of academic integrity for this course. In particular, assessments that are not specifically labelled as being group work should be completed without outside help. We encourage you to make use of other internet sources in the learning process and for assistance on homework, but online resources are not to be used during quizzes or exams. Incidences of academic dishonesty will result at a minimum of a zero grade for that particular assignment, or possible stricter sanctions in accordance with University policy (see below).

ACADEMIC CODE OF CONDUCT

Students are encouraged to review the Student Code for the University of Utah:

<https://regulations.utah.edu/academics/6-400.php>. In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, research misconduct, misrepresenting one's work, and/or inappropriately collaborating. A student who engages in academic misconduct as defined in Part I.B. may be subject to academic sanctions including but not limited to a grade reduction, failing grade, probation, suspension or dismissal from the program or the University, or revocation of the student's degree or certificate. Sanctions may also include community service, a written reprimand, and/or a written statement of misconduct that can be put into an appropriate record maintained for purposes of the profession or discipline for which the student is preparing.

ADDITIONAL POLICIES AND RESOURCES

Inclusivity Statement: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status, and other unique identities. gender, sexuality, disability, age, socioeconomic status, ethnicity, race, culture, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Discrimination and Harassment: 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 Office of the Dean of Students, 270 Union Building, 801-581-7066. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS). Please see Student Bill of Rights, section E <http://regulations.utah.edu/academics/6-400.php>. I will listen and believe you if someone is threatening you.

Names/Pronouns. Canvas allows students to change the name that is displayed AND allows them to add their pronouns to their Canvas name. 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, which managed can be managed at any time). 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 or on assignments. Please advise me of any name or pronoun changes so I can help create a learning environment in which you, your name, and your pronoun are respected. If you need any assistance or support, please reach out to the LGBT Resource Center. https://lgbt.utah.edu/campus/faculty_resources.php

English Language Learners. If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development. These resources include: the Writing Center (<http://writingcenter.utah.edu/>); the Writing Program (<http://writing-program.utah.edu/>); the English Language Institute (<http://continue.utah.edu/eli/>). Please let me know if there is any additional support you would like to discuss for this class.

Undocumented Student Support. Immigration is a complex phenomenon with broad impact—those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, confidential arrangements may be requested from the Dream Center. Arrangements with the Dream Center will not jeopardize your student status, your financial aid, or any other part of your residence. The Dream Center offers a wide range of resources to support undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, please contact the Dream Center at 801.213.3697 or visit dream.utah.edu.

Veterans Center. If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: <http://veteranscenter.utah.edu/>. Please also let me know if you need any additional support in this class for any reason.

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.

Student Success Advocates: The mission of Student Success Advocates is to support students in making the most of their University of Utah experience (ssa.utah.edu). They can assist with mentoring, resources, etc. Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact a Student Success Advocate for support (<https://asuu.utah.edu/displaced-students>).

The Americans with Disabilities Act:

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 & 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 alternative format with prior notification to the Center for Disability & Access.

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 on the basis of your sex, including sexual orientation or gender identity/expression, you are encouraged to report it to the University's Title IX Coordinator; Director, Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or to 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 police, contact the Department of Public Safety, 801-585-2677(COPS).

Campus Safety: 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

University Counseling Center The University Counseling Center (UCC) provides developmental, preventive, and therapeutic services and programs that promote the intellectual, emotional, cultural, and social development of University of Utah students. They advocate a philosophy of acceptance, compassion, and support for those they serve, as well as for each other. They aspire to respect cultural, individual and role differences as they continually work toward creating a safe and affirming climate for individuals of all ages, cultures, ethnicities, genders, gender identities, languages, mental and physical abilities, national origins, races, religions, sexual orientations, sizes and socioeconomic statuses.

Office of the Dean of Students The Office of the Dean of Students is dedicated to being a resource to students through support, advocacy, involvement, and accountability. It serves as a support for students facing challenges to their success as students, and assists with the interpretation of University policy and regulations. Please consider reaching out to the Office of Dean of Students for any questions, issues and concerns. 200 South Central Campus Dr., Suite 270. Monday-Friday 8 am-5 pm.

TENTANTIVE CLASS SCHEDULE

Week	Monday	Wednesday	Friday
1	8/24/2020	8/26/2020	8/28/2020
	First Day of Class	1.2, 1.3	2.1
	Syllabus		
	1.1		
2	8/31/2020	9/2/2020	9/4/2020
	2.2	2.3	2.4
	HW 1.1 and 1.2		
	HW 1.3		
	HW 2.1		
	Quiz 1 (1.1-2.1)		
3	9/7/2020	9/9/2020	9/11/2020
	Labor Day No Class	2.5, 3.1, 3.2	3.3, 3.4
	HW 2.2		
	HW 2.3		
	HW 2.4		
	Quiz 2 (2.2-2.4)		
4	9/14/2020	9/16/2020	9/18/2020
	4.1, 4.2	Exam 1 Review	Exam 1 (1.1-3.4)
	HW 2.5		
	HW 3.1 and 3.2		
	HW 3.3 and HW 3.4		
	Quiz 3 (2.5-3.4)		
5	9/21/2020	9/23/2020	9/25/2020
	4.3, 4.4, 4.5	5.1	5.2, 5.3
	HW 4.1 and 4.2		
6	9/28/2020	9/30/2020	10/2/2020
	5.4, 6.1	6.2	6.3
	HW 4.3, 4.4, and 4.5		
	HW 5.1		
	HW 5.2 and 5.3		
	Quiz 4 (4.1-5.3)		
7	10/5/2020	10/7/2020	10/9/2020
	7.1	7.2	7.3
	HW 5.4, 6.1, and 6.2		
	HW 6.2 and 6.3		
	Quiz 5 (5.4 - 6.3)		
8	10/12/2020	10/14/2020	10/16/2020
	Parabolas	Exam 2 Review	Exam 2 (4.1-7.3)
	HW 7.1 and 7.2		
	HW 7.3		
	Quiz 6 (6.3-7.3)		
9	10/19/2020	10/21/2020	10/23/2020
	Circles	Ellipses	Ellipses/Hyperbolas
	HW C.1 Parabolas		
10	10/26/2020	10/28/2020	10/30/2020
	Hyperbolas	8.1	8.2
	HW C.2 Circles		
	HW C.3 Ellipses		
	Quiz 7 (Parabolas, Circles, Ellipses)		
11	11/2/2020	11/4/2020	11/6/2020
	8.3	8.4	8.5
	HW C.4 Hyperbolas		
	HW 8.1 and 8.2		
	Quiz 8 (Hyperbolas and 8.1 8.2)		
12	11/9/2020	11/11/2020	11/13/2020
	9.1	9.1, 9.2	9.2
	HW 8.3		
	HW 8.4		
	HW 8.5		
	Quiz 9 (8.3-8.5)		
13	11/16/2020	11/18/2020	11/20/2020
	9.3	Exam 3 Review	Exam 3 (Conic Sections and 8.1-9.3)
	HW 9.1		
	HW 9.2		
	Quiz 10 (9.1-9.2)		
14	11/23/2020	11/25/2020	11/27/2020
	9.4	9.5	Thanksgiving Break
	HW 9.3		No Class
15	11/30/2020	12/2/2020	12/4/2020
	Final Review	Final Review	Reading Day
	HW 9.4	Last day of class	
	HW 9.5		
16	12/7/2020	12/9/2020	12/11/2020
	Finals Week	Finals Week	Finals Week

Key
Lecture
Homework Due
Quiz Due
Review
Exams and Final