

Math 1050: College Algebra

Fall Semester 2021

MoWe – 4:00PM–6:00PM, [Room 202 Sandy Center](#)

Instructor:	John Nordstrom
Email:	nordstro@math.utah.edu
Office Hours:	Before and after class
Zoom Conference Office Hours:	TBD

It is best to reach me by email, either through Canvas email or directly to the email address above (note the missing 'm' from my name in the address). I am generally available for a few minutes before and after class to go over any questions you have. I will also hold Zoom office hours; the schedule of these will be setup after the start of class.

Required Materials

The textbook for this course is available at no cost over Canvas.

Course Description

This course covers functions, inverses, and graphs; polynomial, rational, radical, exponential, and logarithmic functions; systems of equations and matrices; applications; arithmetic and geometric sequences and series.

Course Outcomes

1. Sketch the graphs of quadratic and cubic polynomials, rational, radical, exponential, logarithmic, and piecewise functions with or without transformations. Be able to identify important points such as x - and y -intercepts, maximum or minimum values; domain and range; and any symmetry.
2. Given the graph of a function, be able to identify the domain, range, any asymptotes and/or symmetry, x - and y -intercepts, as well as find a rule for the function if it is obtained from a standard function through transformations.
3. Perform composition of functions and operations on functions
4. Find the inverse of a function algebraically and graphically.
5. For polynomial, rational exponential and logarithmic functions, identify the x -intercepts, asymptotes, end behavior and domain from algebraic and graphic representations. Convert back and forth between algebraic, graphical and verbal representations.
6. Solve polynomial, rational, exponential, and logarithmic equations and inequalities.
7. Represent and interpret physical world situations using exponential and logarithmic functions.
8. Define i as the square root of -1 and know the complex arithmetic necessary for solving quadratic equations with complex roots.
9. Perform matrix arithmetic computations.
10. Solve systems of linear and non-linear equations in two or three variables, including the use of Gaussian elimination and matrix inverses in the linear case.

11. Understand sequences and be able to differentiate between geometric, arithmetic and others such as Fibonacci-type sequences, giving direct formulas where available or a numeric representation.
12. Understand series notation and know how to compute sums of finite arithmetic and finite and infinite geometric series.

University Policies

1. ***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 this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS 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 Services.
2. ***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.
3. ***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).
4. **COVID-19 Fall 2021 Statement**
University leadership has urged all faculty, students, and staff to **model the vaccination, testing, and masking behaviors** we want to see in our campus community.

These include:

- Vaccination
- Masking indoors
- If unvaccinated, getting weekly asymptomatic coronavirus testing

Vaccination

- **Get a COVID-19 vaccination** if you have not already done so. Vaccination is proving highly effective in preventing severe COVID-19 symptoms, hospitalization and death

from coronavirus. Vaccination is the single best way to stop this COVID resurgence in its tracks.

- Many in the campus community already have gotten vaccinated:
 - More than 80% of U. employees
 - Over 70% of U. students
- Visit <http://mychart.med.utah.edu/>, <http://alert.utah.edu/covid/vaccine>, or <http://vaccines.gov/> to schedule your vaccination.

Masking

- While masks are no longer required outside of Health Sciences facilities, UTA buses and campus shuttles, **CDC guidelines now call for everyone to wear face masks indoors.**
 - Check the CDC website periodically for masking updates—
<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>
 - Treat masks like seasonal clothing (i.e. during community surges in COVID transmission, masks are strongly encouraged indoors and in close groups outside).

Testing

- **If you are not yet vaccinated, get weekly asymptomatic coronavirus tests.** This is a helpful way to protect yourself and those around you because asymptomatic individuals can unknowingly spread the coronavirus to others.
 - Asymptomatic testing centers are open and convenient:
 - Online scheduling
 - Saliva test (no nasal swabs)
 - Free to all students returning to campus (required for students in University housing)
 - Results often within 24 hours
 - Visit alert.utah.edu/covid/testing
- **Remember: Students must self-report if they test positive for COVID-19** via this website: <https://coronavirus.utah.edu/>.

5. **Undocumented Student Support Statement.** 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.
6. **Drop/Withdrawal Policies.** Students may drop a course within the first two weeks of a given semester without any penalties. Students may officially withdraw (W) from a class or

all classes after the drop deadline through the midpoint of a course. A “W” grade is recorded on the transcript and appropriate tuition/fees are assessed. The grade “W” is not used in calculating the student’s GPA. For deadlines to withdraw from full-term, first, and second session classes, see the U’s Academic Calendar.

7. Student Mental Health Resources:

- Rates of burnout, anxiety, depression, isolation, and loneliness have noticeably increased during the pandemic. If you need help, reach out for [campus mental health resources](#), including counseling, trainings and other support.
- Consider participating in a [Mental Health First Aid](#) or other [wellness-themed](#) training provided by our Center for Student Wellness and sharing these opportunities with your peers, teaching assistants and department colleagues

8. Other important information to consider including:

- a. Student Code: <http://regulations.utah.edu/academics/6-400.php>
- b. Accommodation Policy (see Section Q): <http://regulations.utah.edu/academics/6-100.php>

Course Structure & Policies

The class schedule lists this class as being a lecture course, and that is true as far as it goes. But like any mathematics course, this course will require your active participation to be effective. You will have to do much of the heavy lifting yourself, both in and out of class. You are expected to do the assigned homework, not for any points you might earn, but because:

You learn math by doing math.

We will spend the first part of every class going over questions from the homework; if you haven’t done the homework, you won’t be able to ask questions about it. Please don’t be afraid to ask questions, either in or out of class. If there is something you do not understand, no doubt there are other students who are also lost and will appreciate your question.

I expect students to be engaged and active participants during every class. You should be ready to work problems related to the lecture, either by yourself or in small groups. Occasionally I will have groups of students work on problems at the board.

Food & Drink: I’m okay with a small amount food and drink in the classroom, but it must be quiet and neat food and drink. Quiet because I find that random eating noises to be very distracting (and I suspect many of your fellow students do as well). Neat because the Sandy Center is a nice environment for learning and we want to keep it that way. In particular, the Sandy Center requests any drinks be in bottles with secure caps to reduce the chances of damaging spills.

Electronic Devices in Class: Since your textbook is provided to in electronic form on Canvas, it seems pretty unreasonable to ban all electronic devices. Which is not to say that all activity on electronic devices is allowed. In general, you should limit your use of such devices to taking notes and referencing the textbook. In particular, any activity not directly related to our class and the current lecture is strictly forbidden. Also, class time is not the time to be doing your homework.

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.

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.

Exam Dates: The final exam is December 15, 1:00-3:00 pm. The *only* possible conflicts with this schedule occur if you are also taking Business Core 3010 or 3020 or French 1010, 1020, 2010, or 2020. If you are in one of these classes, work out final exam arrangements with your two instructors within the first two weeks of the semester.

Exam	Date
Midterm 1	Monday 9/27
Midterm 2	Monday 11/8
Midterm 3	Monday 11/29
Final	Wednesday 12/15 1:00 – 3:00 PM

Official Drop/Withdraw Dates: The last day to drop classes is Friday, September 3; the last day to withdraw from this class is Friday, October 22. 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 September 6, October 10-17, and November 25-26.

Rough Schedule

Week #	Monday	Wednesday	Schedule Notes	Sections	Assessments
1	8/23	8/25		1.1-1.3	Quiz 1
2	8/30	9/1		1.3-1.5	Quiz 2
3		9/8	no class 9/6	2.1-2.2	Quiz 3
4	9/13	9/15		2.3-2.4	Quiz 4
5	9/20	9/22		2.5	Quiz 5
6	9/27	9/29		3.1-3.2	Exam 1
7	10/4	10/6		3.2-3.3	Quiz 6
Fall Break 10/10-17					
8	10/18	10/20		3.4, 4.1-4.2	Quiz 7
9	10/25	10/27		4.3-4.4	Quiz 8
10	11/1	11/3		4.5	Quiz 9
11	11/8	11/10		6.1-6.2	Exam 2
12	11/15	11/17		6.3-6.5	Quiz 10
13	11/22	11/24	no class 11/25-26	7.1	Quiz 11
14	11/29	12/1		7.2	Exam 3
15	12/6	12/8		Review	
	12/15		1:00-3:00 pm		Final Exam

Please note that this is an *approximate* schedule of what we will be covering. There is a good chance that which sections are covered when will change from what is stated above. Major changes, such as moving the dates of exams, will be announced and discussed in class ahead of time.

Grading Policy (Evaluation Methods & Criteria)

The grading scale is the standard one as follows:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
≥93%	90-93%	87-90%	83-87%	80-83%	77-80%	73-77%	70-73%	67-70%	63-67%	60-63%	<60%

The course grade consists of several components:

- 15% of final grade: Homework. Homework is delivered online through the IMathAS system. These homework assignments will be linked through Canvas and are fully online (no file uploads needed). If you think you have caught a mistake in the online assignments, email me with an explanation of what you think is wrong.
- 15% of final grade: Quizzes. There will be weekly quizzes given in class. **Calculators will not be allowed on quizzes.**
- 45% of final grade: Midterms. There will be three midterm exams which are longer than quizzes. These will also be given in class. The lowest midterm exam score may be dropped and replaced by a higher final exam grade. Each midterm is worth 15%. If you do not take

an exam, that score will not be dropped -- it's best for you in the course to attempt all the assigned work. **Calculators will not be allowed on exams.**

- 25% of final grade: Final Exam. The final exam is a comprehensive exam covering all topics in the course. The final exam grade will replace the lowest midterm score. **Calculators will not be allowed on the final.**

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.

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.