

MATH 1050-070
COLLEGE ALGEBRA
FALL 2019 SYLLABUS

- INSTRUCTOR:** John Nordstrom, Associate Instructor, Continuing Education
- TIME & PLACE:** MW 4:00 PM – 6:00 PM, Room 107 Sandy Center
10011 Centennial Parkway, Suite 100 Sandy, UT 84070, 801-587-2520
- 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.
- OFFICE HOURS:** Being adjunct faculty, I don't have a University office; not having an office, I don't have office hours. I generally try to be available both before and after class to answer any questions you have. I can also be reached by either of following methods (email is preferred):
- Phone:** 801-918-3974 (between 9:00 AM and 9:00 PM)
Email: nordstro@math.utah.edu (anytime) *Note the missing 'm' in my name!*
Website: Canvas
- PREREQUISITES:** "C" or better in (MATH 1010 OR MATH 1060 OR MATH 1080 OR MATH 1090) OR Accuplacer CLM score of 60 or better OR ACT Math score of 23 or better OR SAT Math score of 540 or better.
- It should be noted that very few majors on campus require Math 1050. Math 1050 is a technical mathematics course designed primarily to prepare students for calculus. The general education QA requirement is also fulfilled by Math 1030 or Math 2000 for students not needing 1050 for their degree program. These courses may well be a better fit for those majors that do not require 1050.
- COURSE OBJECTIVES:** The primary objective of the course is to prepare students for future mathematics courses such as: calculus, linear algebra, and discrete mathematics.
- Topics covered include numbers, functions, sequences, series, counting problems, graphs of functions, inverse functions, polynomials, rational functions, n^{th} roots, exponential functions, logarithms, piecewise defined functions, matrices, and matrix equations.
- EXPECTED LEARNING OUTCOME:**
1. Sketch the graph of basic polynomials (second and third order), 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. For rational functions, identify x and y intercepts, vertical, horizontal and oblique asymptotes (end behavior), and domain. Use information to sketch graphs of functions.
 3. For polynomial functions identify all zeros (real and complex), factors, x and y intercepts, end behavior and where the function is positive or negative. Use information to sketch graphs.

4. Understand the relationships between graphic, algebraic, and verbal descriptions of functions.
5. 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.
6. Define i as the square root of -1 and know the complex arithmetic necessary for solving quadratic equations with complex roots.
7. Solve absolute value, linear, polynomial, rational, radical, exponential and logarithmic equations and inequalities.
8. Find the inverse of a function algebraically and graphically.
9. Perform composition of functions and operations on functions.
10. 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.
11. Understand series notation and know how to compute sums of finite arithmetic and finite and infinite geometric series.
12. Solve systems of equations (3×3 linear) and non-linear equations in two variables.
13. Make sense of algebraic expressions and explain relationship among algebraic quantities including quadratic, exponential, logarithmic, rational, radical, and polynomial expressions, equations and functions.
14. Represent and interpret “real world” situations using quadratic, exponential, logarithmic, rational, radical, and polynomial expressions, equations, and functions.

**COURSE
STRUCTURE:**

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.

HOMEWORK:

All homework is to be completed on MyOpenMath, which you will access on the course Canvas page. Due dates for homework assignments can also be found there. **Late homework will not be accepted.** I will gladly answer any questions you may have about your homework. Additionally, you may work with others on assignments and you may submit unlimited answers for each prompt. Please note, homework is a substantial part of your grade for the course (15%), so it is to your benefit to do all of it. More importantly, doing the homework gives you the chance to *really* learn the

material. Regular practice is essential in learning mathematics, because:

You *learn* math by *doing* math.

Most students find the more homework they practice, the better they do on the exams. You should be prepared to spend at least two hours studying outside of the class for each hour you spend in class.

QUIZZES

We will have a short quiz on most weeks, typically on Wednesdays. **You must be in attendance to take the quiz.** In order accommodate conflicts in schedules that may keep students from attending class on a particular day, approximately 25% of the quiz grades will be dropped.

TESTING:

There will be three midterms and a comprehensive final exam. These tests will be taken in class. You will have one hour to complete each of midterms and two hours to complete the final. The dates of the midterms are listed toward the end of this syllabus. **No calculators are allowed on the exams.**

APPROXIMATE GRADING:

Homework:	15%
Quizzes:	7%
Midterms:	54%
Comprehensive Final:	24%

Please note that this is the *approximate* weight given to each of the components you will be graded on. In particular, I typically give more weight to your final if you do particularly well on it, though I also reserve the right to give it more weight if you do very poorly on it. You must receive at least a 50% or higher on the final exam to receive a grade of 'C' or better. With all that being said, my 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%

Note that circumstances may dictate that we deviate from either the planned number of tests, or the grading and scoring guidelines as described. Any changes will be announced and discussed in class.

GETTING HELP:

You may find that you need some extra help beyond what the class can provide. In addition to the course text and homework assignments, our Canvas page also contains additional resources, such as links to Math Department lecture videos and additional practice problems. The Math Department has a free tutoring center located on campus in the T. Benny Rushing Mathematics Center (www.math.utah.edu/undergrad/mathcenter.php). The ASUU Tutoring Center (tutoringcenter.utah.edu/) provides both individual and group tutoring at reasonable rates.

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.

All students are expected to maintain adult and professional behavior in the classroom. Please respect your classmates by not engaging in distracting behavior, such as talking while I am lecturing, doing your homework in class, using your phone or laptop for anything other than referencing the text, or eating while in class.

While I have tried to be as thorough as possible with the syllabus, situations can change once the semester begins. The syllabus is not a legally binding contract. As instructor, I reserve the right to change any portion of the syllabus provided you are given enough notice.

ACCOMMODATION: 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 Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

If you have any special needs or requests, please let me know. There is a good chance that we find a solution that meets your needs. Please let me know, discreetly, if you have any sort of phobia, anxiety disorder, TBI, PTSD, C-PTSD, or other challenges that would cause psychological harm to be called on in class. While I want students to feel mentally stretched during class, especially while working on problems as a large group, I definitely don't want to cause anyone harm. So, please tell me if that is the case for you and I will confidentially accommodate your request.

CLASSROOM SOCIAL EQUITY: I strive to be ethical, kind, fair, inclusive, and respectful in my classroom and expect students to behave similarly. Please let me know if there is a name you prefer to be called by. Likewise, please inform me of whichever pronouns you prefer me to use for you. I will put great effort into honoring your request and ask that you correct me if I do happen to make a mistake.

I would greatly appreciate if you would let me know if I inadvertently offend you in any way. I will take corrective action immediately. While I want this semester to be a challenging semester, I do not want it to be a painful semester for anyone.

SAFTTY 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.

IMPORTANT DATES:

Be sure to consult the official [Academic Calendar](#) for other important dates and to make sure there are no changes from these dates.

- First classMonday, August 19
- Last day to add/dropFriday, August 30
- Labor Day holidayMonday, September 2
- Last day to withdrawFriday, October 18
- Fall BreakOctober 6 – 13
- Last class.....Wednesday, December 4

EXAM SCHEDULE:

Please note that the dates for the midterms are somewhat tentative; there is a good chance that those dates may change slightly. The final date and time are according to the University's [Final Exam Schedule](#).

- Midterm 1Wednesday, September 18
- Midterm 2Wednesday, October 23
- Midterm 3Wednesday, November 20
- Final (comprehensive)Monday, December 9
(from 1:00 PM – 3:00 PM)**