College Algebra Math 1050, FALL 2019

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Office Hours: W 2-3, T 1-2, Tentative

TA: Sarah Hall, sarahgracehall@gmail.com
Office Hours: M 9:30-10:30, H 10:30-11:30, LCB Loft

SI: To be determined

Course Webpage: We will be using Canvas extensively. I will be posting any class announcements in Canvas. Be sure to turn on notifications so that you will be alerted to them.

Course Goal: Improve quantitative reasoning and prepare for future math learning in calculus, linear algebra, and discrete mathematics.

NOTE about Math 1050: 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 are a better fit for those majors that do not require 1050.

Topics to be covered: 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 x 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.

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. Please note that you can print material for this class for free in the mathematics computer lab located in the tutoring center.

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

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.** The SI, TA, or I will 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%), it is to your benefit to do all your homework—partial credit is better than no credit.*

Quizzes: There will be 8-10 weekly quizzes (Fridays when there is no midterm.) **You must be in attendance to take the quiz**, however the three lowest quiz scores will be dropped. The quizzes will be group quizzes. I will randomly assign you to groups each week.

Attendance: Like any college course, attendance is not "mandatory." However, concepts will be thoroughly explained and reviewed in class, thus it is to your absolute benefit to attend all classes. Students who regularly attend score on average 30% higher on exams than those who do not.

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

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

MIDTERMS:
Friday, September 20
Friday, October 25
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 or quizzes. Students who miss an exam or quiz will receive a "0" on the missed exam.

Grades: Numerical semester scores will be determined using the following

formula: 15% homework, 7% quizzes, 18% *each* midterm exam, 24% final exam. The three lowest quiz scores will be dropped. Your score on the final exam will replace your lowest midterm score or you will receive a 2% bonus to your final **exam** grade, whichever results in the highest grade. You may NOT drop the final.

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-	60>N :E

ADDITIONAL RESOURCES:

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.

CANVAS Page for the course: The course has a Canvas page where all information will be kept including the link to your textbook, MyOpenMath, information about lecture videos, and reviews for exams.

Math Department Video Lectures: Video lectures are available at: http://www.math.utah.edu/lectures/math1050.html

Supplementary Instruction: Schedule and location will be discussed the first week of class. Postings for weekly sessions can also be found on the course Canvas page.

TA: The TA is available to meet with students individually.

Additional Policies:
- I do not allow the use of laptop computers (where the screen is perpendicular to the desk) in my classroom, in order to minimize student distractions. 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.

- There will be no retakes of exams, for any reason.

- If you have an 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.

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

- I will provide and expect 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.

- If you have questions about any exam/assignment grade, or you want to appeal the grading of the exam/assignment, you must turn it in to me within one week of the exam/assignment being turned back. 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 time-frame of a week from when I hand back the exam/assignment.

- If you cheat on any homework, 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 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.

- 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 will not offer any additional extra credit at the end of the semester or any other way for you to improve

your grade at that time. Please respect this and do not ask for special favors or extra credit or some way to get a higher grade when you realize you don't like your grade. The only way to "better your grade" at the end of the semester is to retrieve your final exam, compare it to the solutions, and see if you have any grading appeals. If you do have grading appeals on the final exam, please turn it in to me. I'm happy to look over those and possibly give points back, if it's warranted. Other than that, I consider it disrespectful of me and my time for you to ask for a higher grade than you earned, or for some possible way to increase your grade, at that point.

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.

Addressing Sexual Misconduct:
Title IX makes it clear that violence and harassment based on sex andschool grades, many core concepts and practices are accessible at a much earlier age. In fact, if the students are to be successful in algebra their teachers in early grades have to be cognizant and knowledgeable of what those concepts are and how they develop. The purpose of this course is to extend 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.

Student Names and Personal Pronouns: Class rosters are provided to the instructor with the students 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 U-ID 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.

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.

This document is subject to changes. Any changes will be announced in class and on canvas.