Math 1050-002: College Algebra
Fall 2020

Lecture: MWF 8:05am-9:25am IVC

Instructor: Faith Pearson
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E-mail: faith@math.utah.edu
Office Hours: MW 9:30am-10:30am

Course Description: This is a course in the algebra and quantitative reasoning skills needed for success in calculus and other sciences. A comprehensive list of learning objectives is below. Note: Few majors on campus require Math 1050. Although Math 1050 fulfills the general education QA requirement, those who do not need it as a prerequisite or for their major are encouraged to investigate Math 1030 or Math 2000 to fulfill that requirement.

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.

COVID-19 Considerations: Students must self-report if they test positive for COVID-19 via coronavirus.utah.edu.

Expected Learning Outcomes:

1. Sketch the graph of basic 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.

Communication and Technology Expectations:

- I am best reached via Canvas messaging or my email listed above. I will do my best to respond promptly (if contacted within reasonable hours). I would like to encourage you to email me only if it is something 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 on Canvas instead. This way the information is shared quickly to the entire class, and each of you can benefit from seeing other classmates' questions.
- The course material will be delivered through lectures via Zoom. I will post the slides I will use as an outline for lectures on Canvas by 5pm the day before class.
- Students should come to class prepared to participate and are encouraged to have their video cameras on if possible. This will help me get to know you!
- Office hours will be conducted via Zoom.
- Students should be generally familiar with using Canvas and Gradescope. Quizzes and exams will need to be uploaded to Gradescope, and homework will be available and submitted on Canvas.
- 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.
- Given that regular computer access will be crucial to success in this course, it is recommended that all students have access to a personal computer. For students who do not have access to a computer, the Marriott library is loaning laptops to students. More information can be found at https://lib.utah.edu/coronavirus/checkout-equipment.php.

Assignments, Assessment & Grading

Homework (17%): All homework is to be completed on IMathAS, which you will access on the course Canvas page. Due dates for homework assignments can also be found there. 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 so it is to your benefit to do all your homework—partial credit is better than no credit.

Quizzes(13%):

- There will be 10 group quizzes given on the Fridays when there is no exam. They will be delivered through Canvas and submitted through Gradescope within a certain time window.
- **Attendance is required** in order to receive credit for quizzes. The two lowest quiz scores will be dropped.

Midterm Exams (60%) & Final Exam (10%):

- There will be four **in-class** midterm exams and an **in-class** final exam which will be delivered through Canvas and submitted through Gradescope.
- The lowest midterm exam score will be dropped, and the remaining midterms will be worth 20% of your grade each. **If you do not take an exam, that score will not be dropped.**
- 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 exam dates and times are fixed, and are listed later in the syllabus. **I will not offer the exam at a different time** except in the most extenuating of circumstances which are communicated to me as far in advance as possible. Any regrade request must be received within one week of grades being posted.

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.

Calculator Policy: Calculators will be useful for homework, but will not be permitted on quizzes or exams.

Grades: 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

Important Dates

Drop Deadline ..... Friday, September 4
Labor Day (NO CLASS) ..... Monday, September 7
Exam 1 ..... Friday, September 11
Exam 2 ..... Friday, October 9
Withdraw Deadline ..... Friday, October 16
Exam 3 ..... Friday, October 30
Exam 4 ..... Friday, November 20
Thanksgiving Break (NO CLASS) ..... November 26-29
Final Exam ..... Wednesday, December 9, 8:00am-10:00am

Disclaimer: I reserve the right to change any information in this syllabus throughout the semester. If I make a change to the course policies, I will inform you in class, and post an updated version of the syllabus to Canvas. I will hold you accountable for information that is stated in class or posted on canvas.

Course Roadmap Week-by-Week: Below is an outline and rough schedule of the sections covered in this course.

Week 1 Introduction, Sections 1.1-1.3

Week 2 Sections 1.1-1.5

Week 3 Section 2.1, Exam 1

Week 4 Sections 2.2-2.3

Week 5 Sections 2.4-2.5

Week 6 Sections 3.1-3.2

Week 7 Sections 3.3-3.4, Exam 2

Week 8 Sections 4.1-4.3

Week 9 Sections 4.4-4.5

Week 10 Exam 3

Week 11 Sections 6.1-6.3

Week 12 Sections 6.4-6.5

Week 13 Exam 4

Week 14 Sections 7.1-7.2

Week 15 Review

Week 16 Final Exam

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:

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 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, 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).

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.

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.

Student Names and Personal Pronouns: 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). 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.

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.

Other Resources:

Tutoring Center & Computer Lab: There is free online tutoring via the T. Benny Rushing Mathematics Student Center. For more information, visit their website at
http://www.math.utah.edu/undergrad/mathcenter.php

Departmental Videos: The math department has a full set of lecture videos which you are welcome to use to supplement our course material. These can be found at
http://www.math.utah.edu/lectures/

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.

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.

LGBT Resource Center: If you are a member of the LGBTQIA+ community, I want you to know that my classroom is a safe zone. Additionally, the University of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Olpin Union Building. Hours: M-F 8-5pm. You can visit their website to find more information about the support they can offer, a list of events through the center and links to additional resources: http://lgbt.utah.edu/. Please

also let me know if there is any additional support you need in this class.

Veteran's Center: If you are a student veteran, the University of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-R 8am-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.