MATH 2000
Algebraic Reasoning
Spring 2020, Monday & Wednesday, CSC 25
2:00-4:00pm
Credit Hours: 4.0

Instructor: Amanda Cangelosi (she/her/hers)

Email: cangelos@math.utah.edu (note the missing i)

Office: JWB 217

Office Hours: By appointment (preferred) or Fridays 12:00-2:00 unless Amanda has a scheduling conflict, in which case she'll let you know ahead of time.

Course Web Site: Canvas — instructure.utah.edu

Prerequisite: “C” or better in MATH 1010 OR Accuplacer CLM score of 60 or better OR ACT Math score of 23 or better OR SAT Math score of 570 or better


We will focus on Chapters 1-8 and 13. There is no need to print these out, as Amanda will provide paper copies on the days that we use them in class, and you are welcome to access the book online during class via your own devices if available.

• Course Content:

This course is a course in basic algebra that emphasizes depth, rather than breadth. We will investigate how algebraic concepts connect with the elementary school curriculum, and how algebra generalizes elementary arithmetic. The use of manipulatives and alternate representations will pervade the course. Students will be encouraged to make use of argumentation based on these representations to explain solutions to problems encountered in algebra.

• Expected Learning Outcomes:

By the end of the course, students will be expected to:

1. Understand the difference between algebraic expressions and equations.
2. Represent algebraic expressions and equations up to second degree using algebra tiles.
3. Simplify expressions and solve equations, using argumentation based on manipulatives.
4. Represent functions and move between representations using words, expressions, tables, Cartesian graphs, and function diagrams.
5. Connect polynomial algebra to elementary arithmetic.
6. Solve problems by observing patterns, especially those in arithmetic and geometric sequences.
7. Apply the Fundamental Counting Principle to solve basic probability and combinatorial problems.

Course Materials:

• Three-ring binder with paper for notes, including some graph paper. You will need to keep all class handouts organized in here.
• Cheap three-hole punch for class handouts
• Writing utensil of your choice, noting that pencil and eraser, as well as colored pencils may be useful
• A calculator is NOT required, but you are welcome to use any calculator of your choice during class and at home. A graphing calculator would be particularly useful, but again, not required.
• **How You Will Be Graded:**

  - **In-class work and Homework:** 15%. In-class work and homework will flow in and out of each other. That is, we’ll typically begin some work in class (from the *ATTC* book, most likely) and then homework will be to finish through a certain exercise/explanation. Expect daily homework, which will be necessary to have completed to be able to effectively engage in the next day’s discussion. Homework will either be checked-off for completion during the next class meeting, or it will be collected for closer scrutiny. Come prepared!

  - **Daily Mini-Quizzes:** 15%. At the end of class each day, you’ll be given one brief question assessing your understanding of the basic concept(s) addressed during class. This is meant to be quick and painless, providing Amanda with important feedback regarding your understanding, much like an “Exit Ticket” except the assessment is summative. These will be open-notes. Your lowest two will be dropped.

  - **Regular Quizzes:** 15%. There will be quizzes roughly every other week, most likely five or six of them total. You will be given at least a week’s heads up. These should take about 20-30 minutes of class time and will be about 1-2 pages of prompts, focusing on conceptual understanding. They will be closed-notes unless otherwise specified ahead of time.

  - **Midterm Exams:** 30%. There will be three midterm exams, each non-comprehensive. These are closed-note, but you will be allowed to use a one-page (double-sided) “cheat sheet” with relevant information of your choice, handwritten or typed by you.

  - **Final Exam:** 25%. Or final exam is scheduled for Thursday, April 23, 1:00-3:00, CSC 25. This will be comprehensive and closed-note, but you will be able to use a one-page (double-sided) “cheat sheet” similar to those allowed on your midterm exams.

*Policies and Expectations:* You must be present in class to turn in your homework. No late assignments nor should be expected to be accepted, unless perhaps a student has a serious extenuating circumstance. Similarly, quizzes cannot be made-up, nor can they be taken early, unless there is an exceptional circumstance. Please keep your phone put away unless explicitly allowed by the instructor. Participate actively. While you may occasionally be allowed to use your phone’s calculator or Desmos.com during class, note that phones are not allowed on quizzes/exams. A tentative schedule including due dates will be provided on Canvas.

*Grade Breakdown by Percent:*  
A (100-93); A- (92-90); B+ (89-87); B (86-83); B- (82-80); C+ (79-77); C (76-73); C- (72-70); D+ (69-67); D (66-63); D- (62-60); E (59-0).

*Student 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. 

http://regulations.utah.edu/academics/6-400.php

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, veterans 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).

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@ssa.utah.edu to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

Classroom Social Equity: I strive to be ethical, kind, fair, inclusive and respectful in my classroom and expect students to behave likewise. In this regard, I have these requests of students:

1. Please do tell me, discreetly, if you have any sort of anxiety disorder, TBI, PTSD, C-PTSD, or any other challenge that would cause psychological harm to you by me calling on you in class. I want students to feel a little uncomfortable and stretched during class, while working on problems as a large group, but I definitely don’t want to cause any human being harm. So, please discreetly tell me if that is the case for you and I will confidentially accommodate your request.

2. If your preferred name is different than your legal first name (the preferred name you chose does indeed show up in CIS on my roll sheet, but not yet in Canvas), please log into Canvas and go to Account (on far left) → Settings and change your Display Name to be the name you prefer to be addressed by. This will help me greatly to know students’ names, and to address you correctly when responding to Canvas quiz comments.

3. If there is ever a time that you feel this course or the curriculum is not equitable, please email me or meet with me to discuss your concerns so I have a chance to address that.

ADA Statement: The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, cognitive, systemic, learning, and psychiatric disabilities. A qualifying student needs to have such a disability approved by the Center for Disability Services (162 Olpin Union Building, 581-5020) in order to have the accommodations provided. The instructors need to be informed about such a disability and approved accommodations at the beginning of the semester. The Center for Disability Services will work with students and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the CDS.

Disclaimer: The instructor reserves the right to modify this syllabus to better suit class needs at any time during this semester. Any changes that are made will be immediately communicated during class and via Canvas.