

MATH 4020
Mathematics for Elementary Teachers II
Summer 2020, MTWH 4:35-6:50
Lab: Thursdays 7:00-7:50
Synchronous Meetings via Zoom

Instructor: Amanda Cangelosi (she/her/hers)

Office: JWB 217 (but effectively, Zoom)

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

Office Hours Mondays and Tuesdays, 7:30-8:30 and 2:30-3:30, or by appointment

Course Web Site: Canvas (link from www.utah.edu, using your student ID and CIS password)

Course Content: This course is the second in a two-semester sequence of required mathematics courses for elementary school teachers. The sequence is designed to help K-6 preservice teachers develop a conceptual framework for mathematics, especially for those aspects normally experienced in primary and elementary school. Students consider both mathematical and pedagogical issues in teaching and spend a six-hour practicum in a local school relating their course work to the classroom situation. **Students must complete the practicum in order to pass the course.** In addition, here is a required lab component to this course. Math 4020 covers geometry, statistics, and probability (the majority of our time will be spent on geometry).

Due to COVID-19, this semester's class will be delivered as a synchronous, interactive lecture via Zoom. All meetings will be recorded and posted to our Canvas page, should students be unable to attend lecture meetings. Meetings will be interactive, utilizing Zoom breakout rooms. Since these are unprecedented times, due dates are flexible—just stay in solid communication with Amanda.

Textbook: *Mathematics for Elementary Teachers with Activities* (5th edition), by Sybilla Beckmann. ISBN-13: 978-0134392790. We will discuss material from chapters 10-16 of this text, and homework exercises will be assigned from it.

Resources and Media:

- [zoom.com](https://zoom.us) — links provided in Canvas
- flipgrid.com — embedded within Canvas
- padlet.com — links provided in Canvas
- camscanner.com — highly recommended for scanning your work to be uploaded

How You Will Be Graded:

- Homework: 15%
- Labs: 10%
- In-Class Work: 15%
- Practicum: 10% (required to pass)
- Quizzes: 20%
- Final Exam: 30%

Homework: Starting the second week of class, a homework assignment comprised of textbook problems or other activities from class (e.g., *Geometry Labs*) will be due Tuesdays at 3:30 via Canvas, Padlet, or Flipgrid. Homework is posted to Canvas and should be turned in during class as a hard copy. A subset of each assignment will be scored for correctness and pedagogical structure, as well as completion. Here, “pedagogical structure,” refers to the way in which you explain your solutions, as if

you were classroom teacher explaining your solutions to your students, with attention to wording, sense-making, and representation. No homework assignments will be dropped.

A large portion of summer lab time will be utilized to address homework questions, but there will not be enough time during lab to complete an entire assignment. Plan your weekly time accordingly.

In-Class Work: Peppered throughout the semester, you'll have various assignments utilizing various media (Canvas, Padlet, Flipgrid) that regard activities discussed and explored in class. These serve the purpose of building an online community and sharing your mathematical arguments (deductive reasoning and approaches to problems solving) and representations (visual or written communication).

Quizzes: Starting the second week of class, there will be a quiz every Thursday at the end of class. These are open-note and open-colleague, but you must write your own, unique responses and explanations to receive credit. The quiz will be available on Canvas at the end of class on Thursday, and they will be due (uploaded to Canvas) by midnight. These are meant to prepare you for your final exam.

Labs: There is a required lab component of this course. Students should be registered for the lab section, which is held on **Thursdays, 7:00-7:50 pm**. Our lab session provides an opportunity to engage in collaborative problem-solving, develop procedural fluency from conceptual understanding, and practice communicating mathematics with a focus on arguments and representations. For this short summer session, the labs will largely focus on homework questions and working on quizzes. For lab points—which count toward your lecture grade—you'll be asked to provide formative feedback on class as part of your lab assignment. No labs will be dropped.

Practicum: Each student will spend six hours—either via provided videos or with an elementary-aged student with whom you're sheltering-in-place, in Math 4010/4020-relevant content. Two reports on these interactions will be due by **June 18**. Details will be discussed in class and posted to Canvas. **You must complete the practicum to pass this class.**

Final Exam: Our final exam is scheduled for **Wednesday, June 17**. This is a take-home, open-note, open-colleague exam. It will be comprehensive. You will have roughly 24 hours to complete this exam, uploading your unique responses to Canvas.

Tentative Schedule

Meetings	Topic/Section
May 11-14	Materials pick-up; <i>Angles Around a Point</i> ; 10.1, 10.3
May 18-21	<i>Flatland</i> ; Polygon angle sums; 10.4; 11.1, 11.2
May 25-28	NO CLASS May 25 ; Area; Shearing; Right Triangle Theorem 12.1-12.9
June 1-4	Solids, surface area, volume; 13.1-13.3
June 8-11	<i>Dice Games</i> ; 16.1, 16.2, 15.1, 15.2, 15.3
June 15-17	Materials return; review; final exam

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@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.

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.