EDUC 263E: Quantitative Reasoning in Mathematics II (3 units)
Summer 2026

Tuesdays, at varied times
[please see schedule below]

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Course Overview/Goals

The EDU263E (Quantitative Reasoning in Mathematics I) course is Part 1 of the three-course sequence in elementary mathematics teaching methods. This sequence is designed to provide teacher candidates with a coherent set of experiences for mathematics teaching and learning in elementary schools. Through assigned readings, classroom discussions, content rich mathematics activities and assignments that require work in your field placement, you will be supported to make sense of how to approach the profession of teaching. Through thinking about ourselves as teachers and examining classroom activity, we will more specifically set the stage for our development as elementary mathematics teachers.

The shortest way to summarize this course is that *we will work a lot with the mathematics content taught in K-5 grades in California*!

Our goals for this quarter are to help you:

I. **Recognize how your beliefs and assumptions about the teaching and learning of mathematics and influenced by your own experiences with mathematics.**

II. **Implement dots talks and/or number talks in classrooms.**

III. **Familiarize yourself with the mathematics content in the K-5 California Standards.**

Course Materials

Technology: All course details and materials will be posted on our Canvas course site. You will need to have access to a device that connects to the internet so that you can access email and Canvas.
Readings: All course readings will be posted electronically to Canvas at the beginning of the quarter, so you have the choice to print them or read them online.

Coursework and Grading

We expect you to come to class having completed the reading/viewing and assignments due for that day, and to be prepared to participate in class discussions and activities. This means that you have a clear idea of the main points; you may have formulated some questions; and/or you have noted any related issues that the reading or topic raised for you.

Your participation depends upon your timeliness in attendance. If for any reason, you will miss or be late to class, please email the instructors ahead of time. Regarding participation, we are looking for everyone to contribute to small and whole group discussions in class. Whether you are more talkative or more introverted in nature, we expect that you make concerted efforts to both listen and contribute, monitoring your level of sharing, and making space for others to join in. This will help your learning as well as the learning of the group!

Our expectation is that everyone will receive an A grade. If your work – including the quality of your participation and major assignments – is not at that standard we will discuss ways to improve it, and you will have the opportunity to revise and resubmit. Our goal is learning, not evaluation!

Major Summer Assignments

What:	When:	Where:	Details:
Mathography	Monday, July 6 by 10 pm (Before **Session 2**)	Upload to Canvas	In about 1500 words, Describe your experiences as a math learner. Please include: • Your prior experiences in math classrooms • Your attitudes about math • Your view of yourself as a learner of mathematics • Your view of others as learners of mathematics Consider how these experiences and attitudes may affect your development as a mathematics teacher.
Math-thinking Interview with a student	Monday, Aug 31 by 10 pm (Before **Session 8**)	Upload to Canvas	This submission will be a maximum of 600 words (approximately 2 pages), not including any supporting documents you may wish to attach. The goal of this activity is for you to engage in depth with the mathematical reasoning of a math learner. To do this, you will talk to one of your students about the reasoning they use to solve a math problem!

Summer Course Schedule Overview (tentative)

Date/time	Main Topic	Reading/Assignment due
Session 1 6/30 1:30pm - 4:30pm	> Introduction to the course	
Session 2 07/07 1:30pm- 4:30pm	**> *Counting*** **> *Natural*** *numbers and* ***rational*** *numbers - How many are there?*	Mathography - Due on Canvas July 6, 10pm
Session 3 07/14 1:30pm - 4:30pm	> *What are the different meanings of the* ***addition*** *and* ***subtraction*** *operations?* > **Place value** and base ten.	Van de Walle - Chapter #2: Exploring What it Means to Know and Do Mathematics.
Session 4 07/21 12:30pm - 3:30	> ***Addition*** *and* ***subtraction*** *algorithms*	Humphreys and Parker - Chap. #4: Subtraction across the Grades
Session 5 08/04 3:15-6:00	> *What are the different meanings of the* ***multiplication*** *operation?*	
Session 6 08/11 3:15-6:00	> *How do* ***multiplication*** *algorithms work?*	Humphreys and Parker - Chap. #5: Subtraction across the Grades
Session 7 08/18 3:15-6:00	> *What are the different meanings of the* ***division*** *operation?*	Humphreys and Parker - Chap. #7: Division across the Grades
Session 8 09/01 3:15-6:00	> *How does the* ***division algorithm*** *work?*	Number talks

Course Policies

Submitting to Canvas

All assignments should be digitally submitted to Canvas as a single file, unless otherwise specified by the instructors.

Deadlines and Late Submissions

Assignment deadlines are listed in the course schedule, along with estimated times of completion, to enable you to effectively plan and balance your academic work and other commitments. Despite the best planning, however, we know that life happens! So:

- Please contact us in advance if you have any concerns about completing the major assignments on time. Extensions may be granted by your instructors, if requested.
- Late work that is submitted without an extension may be subject to a grade penalty.
- As with all of your work in this sequence this year, you may revise and resubmit any written assignment for a higher grade.
- Do your best to complete readings such that you can be an active participant in the next class session! If the reading is longer or more academic in nature, find the most salient parts or pieces that stand out to you.

The Honor Code

All Stanford students are expected to follow the Stanford Honor Code and Fundamental Standard, as noted in the STEP Handbook and Stanford Student Guide. Please review Stanford's Honor Code, these recommendations from the Office of Community Standards, and documentation and citation resources from the Hume Center for Writing and Speaking.

Academic Accommodations

Stanford is committed to providing equal educational opportunities for disabled students. Disabled students are a valued and essential part of the Stanford community. We welcome you to our class. If you experience a disability, please register with the Office of Accessible Education (OAE). Professional staff will evaluate your needs, support appropriate and reasonable accommodations, and prepare an Academic Accommodation Letter for faculty. To get started, or to re-initiate services, please visit oae.stanford.edu.

If you already have an Academic Accommodation Letter, we invite you to share your letter with us. Academic Accommodation Letters should be shared at the earliest possible opportunity so we may partner with you and OAE to identify any barriers to access and inclusion that might be encountered in your experience of this course.

Learning Resources

Your peers and instructors are valuable sources of learning, and we hope you will make the most of our time together! In addition, Stanford has a wealth of resources for graduate students, from group study halls to well-being coaches to professional development offerings. Which of the resources below will you explore?

- Writing tutors from the Hume Center for Writing and Speaking, to get additional feedback on your teaching portfolio materials
- English as a Second Language (ESL) courses for international graduate students
- Pedagogy workshops and programs from the Center for Teaching and Learning (CTL), to continue your teaching development
- IDEAL Pedagogy self-paced course, learning community, and/or syllabus consultation from CTL, to continue developing inclusive pedagogy practices
- Peer Academic Coaching from CTL, to help with time management and other work strategies
- Study Halls from CTL, to work in quiet companionship with other students
- Grad Grow from the Office of the Vice Provost for Graduate Education, to develop key professional competencies, including in teaching and mentorship
- Well-being coaches from Vaden, to receive holistic support and guidance