

EDUC 263E: Quantitative Reasoning and Mathematics I
Stanford University, Summer 2023

July 5, 10, 12, 17, 19, 24, 26 | M: 1:15 - 4:00 W: 2:15 - 5:00 pm

****please note July 19th's class is 2:45 - 5:30 pm***

Instructor: Miriam Leshin
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Instructor: [Meghan Smith Durkin](#)
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Course Objectives:

The EDU263E (Quantitative Reasoning and Mathematics I) course is Part 1 of a 3-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 data collection in your field placement, you will be supported as you make sense of how to approach the profession of teaching. Through thinking about ourselves as teachers and examining classroom activity, we will set the stage for our development as elementary mathematics teachers.

Please note: We will adhere to the syllabus as much as possible. However, we are sensitive to the needs of the class, therefore, the syllabus is subject to change.

Course Assignments:

Assignment	Due Date
<i>Mathstory Assignment</i> Write a narrative reflection on your past and present experiences as a math learner and how these experiences shape your identity and beliefs as a teacher.	July 10 at 1 pm
<i>Student Mathstory Assignment</i> For a student in your Summer Explorations class, interview them about their experiences as a math learner and write about what they shared.	July 17 at 1 pm
<i>Number Talk Assignment</i> Plan, facilitate, and reflect on a number talk with a small group or with the whole class in your Summer Explorations class.	July 26 at 1 pm

Readings & Participation:

Assigned readings should be done before class. There will be no lectures in this course. We assume you have read the texts and are prepared for discussion and activity based on your understandings of the readings. Our whole-class learning is enhanced when everyone reads carefully and fully participates in class activities and discussions.

Course Grades:

Course grades will be based on attendance and punctuality, completion of pre-work activities, participation in synchronous activities (discussion about the readings, math content activities, etc.), and the quality and completion of the written assignments.

Course Readings:

California Mathematics Framework (2023). <https://www.cde.ca.gov/ci/ma/cf/>

Martin, D. B. (2015). The collective Black and principles to actions. *Journal of Urban Mathematics Education*, 8(1).

TODOS (2016). Mathematics Education through the Lens of Social Justice: Acknowledgement, Actions, & Accountability [Position statement].

Van de Walle, J. A., Karp, K. S., & Bay-Williams, J. M. (2013). *Elementary and middle school mathematics: Teaching developmentally* (8th ed.). New York: NY: Pearson.

Note: If you wish to purchase either text, they are available through the Stanford Bookstore, Amazon and other sellers. Copies are also on reserve at Cubberley Library. All readings for summer will be accessible through the Canvas website <https://canvas.stanford.edu>. Assignments will also be submitted through this site.

Students with documented disabilities:

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Student Disability Resource Center (SDRC) located within the Office of Accessible Education (OAE). SDRC staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an *Accommodation Letter* for faculty dated in the current quarter in which the request is being made. Students should contact the SDRC as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 650-723-1066, 650-723-1067 TTY).

At a Glance Summary

Date	Topics and In-Class Activities	Readings	Due
Class 1 July 5	<i>Content Focus:</i> Number sense <i>Equity Focus:</i> Locating equity in the classroom: Co-constructing agreements for equitable participation with math tasks	CA Math Framework, Chapter 1 (2023)	
Class 2 July 10	<i>Content Focus:</i> Number sense (cont.) <i>Equity Focus:</i> Reflecting on your experiences with math as a student prepares you to support positive math identities in your students	CA Math Framework, Chapter 3 (pp. 1- 46) (2023)	Mathstory assignment
Class 3 July 12	<i>Content Focus:</i> Fractions <i>Equity Focus:</i> Honoring a range of student thinking prepares you to teach all students and support positive math identities	VDW, Chapter 15: Developing Fraction Concepts	
Class 4 July 17	<i>Content Focus:</i> Fractions (cont.) <i>Equity Focus:</i> Listening to students and to their thinking puts students at the center of teaching	TODOS position statement	Student Mathstory assignment
Class 5 July 19	<i>Content Focus:</i> Decimals & Percents <i>Equity Focus:</i> When students share their strategies with one another, they develop powerful math identities	VDW, Chapter 17: Decimals & Percents	

<p>Class 6 July 24</p>	<p><i>Content Focus:</i> Geometry / Measurement</p> <p><i>Equity Focus:</i> Understanding children's strategies as part of a developmental process enables a focus on growth</p>	<p>VDW, Chapter 19: Measurement concepts</p>	
<p>Class 7 July 26</p>	<p><i>Content Focus:</i> Geometry / Measurement (cont.)</p> <p><i>Equity Focus:</i> Good math tasks increase learning opportunities for all students and support positive math identities</p>	<p>Martin, 2015</p>	<p>Number Talk assignment</p>