Introduction
This is the first of a 3-course sequence focusing on mathematics teaching and learning. The course provides an opportunity for sustained learning and professional growth. Our goals are to help you:

- examine your own knowledge, beliefs, and assumptions about mathematics, teaching, and students,
- increase your knowledge of mathematics and mathematics pedagogy,
- increase your theoretical knowledge and practical experience in planning, teaching, and assessing mathematics,
- understand the mathematical needs of a diverse range of students,
- understand the complexities of diverse, multiple-ability classrooms while broadening your repertoire of teaching techniques, and
- learn from your experiences in schools through informed reflection.

Throughout the three-course sequence, we will consider the Common Core State Standards for Mathematics.

In the first quarter we will analyze teaching practices in many ways, considering the role played by mathematics, the teacher, and the students. Several different examples of practice will be analyzed on video. We will also engage in mathematical tasks that will place you as learners of mathematics and pedagogy. We will consider the acts of close and respectful listening to students’ mathematical thinking and asking important questions in order to probe and further understanding. There will be a joint focus throughout the course on research and practice.

Course Requirements
We expect you to come to class having completed the reading 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. In the summer quarter, you will be required to complete several assignments, conduct readings (see Course Schedule) and complete daily tasks, which will be described during class.

Required Text
Major Assignments:

- Math History: due on July 2nd by 5:00pm.
- Number talk observation notes and reflection: due July 12th by 10:00pm.
- Listening Transcript: due July 13th in class.
- Reflecting on Summer Mathematics: due on July 16th by 5:00pm.

Your Grade:

Your grade will be based on the quality of your participation and assignments, including the Final Assignment, Math History, Listening Assignment, Number Talk Observation and Reflection. We will also take into account active and respectful contributions to class discussions.

Regarding participation, we are looking for you to contribute to both small and whole group discussions. 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. We recognize that you may have more to say about one topic over another, but across the two weeks, we should have heard your thoughts and ideas in both small and whole group discussions. This will help your learning as well as the learning of the group.

Course Schedule (Tentative)

Sunday July 2nd by 5pm Math History Due to Canvas

Session 1 – Wednesday July 5: Mathematics, Mindsets and Number Sense


Session 2 – Thursday July 6: Exploring Number Sense and Number Talks


Session 3 – Friday July 7: Listening to Student Thinking

Session 4 – Monday July 10: What is Mathematics?

- Common Core Standards for Mathematical Practice (2010). (pp. 6-8).

Session 5 – Tuesday July 11: Equity Focused Teaching and Learning


Session 6 – Wednesday July 12: Cultural Analyses of Teaching


Session 7 – Thursday July 13: Working with Student Thinking


Session 8 – Friday July 14: Classroom Culture and the Establishment of Socio-mathematical Norms


Sunday July 16th by 5pm Reflection on Summer Mathematics Due to Canvas
What to turn in and where:

<table>
<thead>
<tr>
<th>What:</th>
<th>By When:</th>
<th>Where:</th>
<th>Formatting &amp; Length:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math History:</td>
<td>Sunday, July 2^{nd} by 5:00pm</td>
<td>Upload to Canvas</td>
<td>500 words</td>
</tr>
<tr>
<td>An Informal Essay</td>
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<tr>
<td>Number Talks</td>
<td>Wednesday, July 12^{th} by 10:00pm</td>
<td>Upload to Canvas</td>
<td>guide and observation form: pdf or photo reflection: 500-1000 words</td>
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<tr>
<td>Analysis</td>
<td></td>
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<tr>
<td>Listening Transcript</td>
<td>Thursday July 13^{th}</td>
<td>Bring to Class</td>
<td>2 hard copies</td>
</tr>
<tr>
<td>Reflecting on Summer Mathematics</td>
<td>Sunday, July 16^{th} by 5:00pm</td>
<td>Upload to Canvas</td>
<td>1000-1500 words</td>
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