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.

**Major Assignments:** Please turn in all assignments to the Dropbox in Coursework by the beginning of class on the day they are due, unless otherwise specified.

- Math History: due on June 29th
- Listening Transcript: due on July 7th
- Number talk observation notes and reflection: due date July 9th by 9pm
- Reflecting on Summer Mathematics: due Sunday, July 12th by 11:59pm
Your Grade:

This quarter your grade will be based on the quality of your assignments: Final Assignment (60%), Math History (10%), Listening Assignment (10%), Number Talk Observation and Reflection (10%) We will also take into account active and respectful contributions to class discussions (10%).

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)

Session 1 – Monday June 29th: Mathematics and Its Impact
Guest: Cathy Humphreys


** Due: Math History

Session 2 – Tuesday June 30th: Exploring Number Sense and Number Talks
Guest: Cathy Humphreys


Session 3 – Wednesday July 1st: What is Mathematics?

- Common Core Standards for Mathematical Practice (2010). (pp. 6-8)
Session 4 – Thursday July 2nd: Listening to Student Thinking


Session 5 – Monday July 6th: Equity Focused Teaching and Learning

- Paying the Price for Sugar & Spice.

Session 6 – Tuesday July 7th: Working with Student Thinking


** Due: Listening Transcript

Session 7 – Wednesday July 8th: Cultural Analyses of Teaching

- Stigler & Hiebert. (1999). The Teaching Gap: Best Ideas from the World’s Teachers for Improving Education in the Classroom. The Free Press. (Chapter 6)

Session 8 – Thursday July 9th: Classroom Culture and the Establishment of Socio-mathematical Norms


** Due: Number Talk Notes and Reflection

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: an informal essay</td>
<td>9 pm Sunday 6/28</td>
<td>Coursework dropbox</td>
<td>500 words</td>
</tr>
<tr>
<td>Listening Transcript</td>
<td>Class time 7/7</td>
<td>Class</td>
<td>2 hard copies</td>
</tr>
<tr>
<td>Number talks: Planning guide/Observation form/Memo &amp; Reflection</td>
<td>9 pm 7/9</td>
<td>Coursework dropbox</td>
<td>guide and observation form: pdf or photo reflection: 500-1000 words</td>
</tr>
<tr>
<td>Reflecting on Summer Mathematics</td>
<td>Sunday, July 12\textsuperscript{th} by 11:59pm</td>
<td>Coursework dropbox</td>
<td>1000-1500 words</td>
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