EDUC 263C: Curriculum & Instruction in Mathematics
CERAS 302
Tuesdays, 3:15 – 6:05pm

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CERAS 220      CERAS 220
Office hours by appointment  Office hours by appointment

Introduction

This is the third of a 3-course sequence focused on mathematics teaching and learning. The course sequence is designed to create an opportunity for sustained learning and professional growth. Our goals for the year are to help you:
- Increase your knowledge of mathematics and mathematics pedagogy
- Examine your own knowledge, beliefs, and assumptions about mathematics, teaching and students
- Increase your theoretical knowledge and practical experiences in planning, teaching, and assessing mathematics
- Understand the mathematical needs of a diverse range of students
- Understand the complexities of diverse, multi-ability classrooms while broadening your repertoire of teaching strategies
- Learn from your experiences in schools through informed reflection

This quarter we will continue to develop skills in lesson planning, and will focus on how particular lessons fit into larger instructional learning segments. We will discuss approaches to developing clearly-articulated learning goals for students, selecting and implementing tasks, choosing participation structures, and using both formative and summative assessment strategies. We will draw upon what we have learned about backwards design (Wiggins & McTighe, 2005) as a way to design learning segments and individual lessons. The experience of developing and refining a segment of instruction is the cornerstone of our work this quarter, and it will prepare you for success on the PACT, the culminating performance assessment of your teaching proficiency in the spring. You will submit pieces of this learning segment often this quarter and there will be frequent chunks of class time dedicated to work-shopping its parts.

Course Requirements

We expect you to come to class having completed the reading and assignments due for that day and prepared to participate in class discussions and activities. Attendance to all sessions is mandatory. Please give us ample notice if you must be late to or miss a class.

Assignments:

Learning Segment Assignment
See assignment sheet for complete detail

Short video clip
During week 3, we will take some time to analyze student reasoning in your classrooms through the use of video records. You will select a 2-minute video clip from one of your video
observations. This clip should focus on students and their engagement in the mathematics of the lesson. You do not need to be in the clip, but it’s fine if you are.

All assignments should be digitally submitted to Coursework unless otherwise specified by the instructors. All feedback will be provided digitally within your submitted documents, and either re-posted to Coursework or emailed to you. Please submit all files as word documents unless otherwise specified.

Please save all files using the following naming convention:
Lastname_Assignment.doc
For example: Sun_ConceptMap.doc

Assessments and Grading:
Your grade will be based primarily on the quality of the assignments mentioned above. We will also take into account attendance and active contributions to class discussions. As with all your work in C&I this year, you may revise and resubmit any written assignment for a higher grade.

We expect that you will turn in all assignments promptly. Please contact us well in advance if you have concerns about completing assignments on time.

University Policies

All Stanford students are expected to follow the Stanford Honor Code and Fundamental Standard, as noted in the STEP Handbook and Stanford Student Guide.
http://www.stanford.edu/dept/vpsa/judicialaffairs/about/welcome.htm

Students with Disabilities. Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional 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 OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk; phone: 723-1066; web site http://studentaffairs.stanford.edu/oae.
## Course Schedule

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<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
<th>Assignments</th>
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Component 1: Memo from Meeting with CT  
**DUE: Sunday, 1/11 by 11 pm**

Component 2: Concept map  
**DUE: Sunday, 1/18 by 11 pm**

Component 3: Learning segment objectives and rationale  
**DUE: Sunday, 1/25 by 11 pm**

Component 4: Culminating Assessment and Rubric  
**DUE: Sunday, 2/1 by 11 pm**

Component 5: Learning Calendar  
**DUE: Sunday, 2/8 by 11 pm**
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<tbody>
<tr>
<td></td>
<td>Gutstein, Lipman, &amp; Hernandez, de los Reyes, (1997). Culturally Relevant Mathematics Teaching in a Mexican American Context. <em>You will be assigned to read one and we will jigsaw in class.</em></td>
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<td>10</td>
<td>Learning from Practice Reflection</td>
<td>TBD</td>
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Component 6: Elaborated Lesson Plan  
**DUE: Sunday, 2/15 by 11 pm**  
Component 7: Math task debriefs  
**DUE: Sunday, 2/22 by 11 pm**  
Component 8: Commentary  
**DUE: Sunday, 3/1 by 11 pm**  
Completed Learning Segment  
**DUE: Sunday, 3/8 by 11 pm**
Readings (available on Coursework)


