EDUC 263C: CURRICULUM & INSTRUCTION IN MATHEMATICS
CERAS 302
TUESDAYS, 3:00 – 5:50PM

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CERAS 229                                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) to design learning segments and individual lessons centered on equity and social justice. 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 EdTPA, 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 workshopping 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. You can request an extension on a due date, but it must be done in a timely manner.
Assignments:
Learning Segment Assignment (LSA)
See assignment sheet for complete detail

Short video clip
During week 3 (on 1/23/17), we will take some time to analyze student reasoning in your classrooms using 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.

Submitting Assignments:
All assignments should be digitally submitted to Canvas unless otherwise specified by the instructors. All feedback will be provided digitally within your submitted documents, and either re-posted to Canvas 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: Anderson_ConceptMap.doc

Assessments and Grading:
Your grade will be based primarily on the quality of the assignments mentioned above. We will also consider 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 by the due date. Please contact us well in advance if you have concerns about completing 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.

Absences:
Absences are for major illness or family emergencies only. In such instances, students are responsible for contacting instructors before class and completing any work missed due to absence. Missing more than two class sessions may result in a grade penalty.

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. Website: https://communitystandards.stanford.edu/student-conduct-process/honor-code-and-fundamental-standard

Students with Documented 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: (650) 723-1066, URL: http://studentaffairs.stanford.edu/oae).

_Honor Code_

1. The Honor Code is an undertaking of the students, individually and collectively:
   1. that they will not give or receive aid in examinations; that they will not give or receive unpermitted aid in class work, in the preparation of reports, or in any other work that is to be used by the instructor as the basis of grading;
   2. that they will do their share and take an active part in seeing to it that others as well as themselves uphold the spirit and letter of the Honor Code.

2. The faculty on its part manifests its confidence in the honor of its students by refraining from proctoring examinations and from taking unusual and unreasonable precautions to prevent the forms of dishonesty mentioned above. The faculty will also avoid, as far as practicable, academic procedures that create temptations to violate the Honor Code.

3. While the faculty alone has the right and obligation to set academic requirements, the students and faculty will work together to establish optimal conditions for honorable academic work.

_Violations of the Honor Code_

Examples of conduct that have been regarded as being in violation of the Honor Code include:

- Copying from another’s examination paper or allowing another to copy from one’s own paper
- Unpermitted collaboration
- Plagiarism
- Revising and resubmitting a quiz or exam for regrading, without the instructor’s knowledge and consent
- Giving or receiving unpermitted aid on a take-home examination
- Representing as one’s own work the work of another
- Giving or receiving aid on an academic assignment when a reasonable person should have known that such aid was not permitted

_Sanctions for Violating the Honor Code_

In recent years, most student disciplinary cases have involved Honor Code violations; of these, the most frequent arise when a student submits another’s work as his or her own, or gives or receives unpermitted aid. The standard sanction for a first offense includes a one-quarter suspended suspension from the University and one or more educational components. In addition, most faculty members issue a "No Pass" or "No Credit" for the course in which the violation occurred. The standard sanction for multiple violations (e.g. cheating more than once in the same course) is a three-quarter suspension and 40 or more hours of community service.
## Course Schedule

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<th>Week</th>
<th>Topic</th>
<th>Readings</th>
<th>Assignments</th>
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<td><strong>DUE: Sunday, 1/14 by 11 pm</strong></td>
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<td>□ Refresh on Kilpatrick et al., Ch. 1 &amp; 4</td>
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<td>□ Bring 2 min video clip</td>
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<td><strong>DUE: in class</strong></td>
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<td>□ Component 2: Concept map</td>
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<td><strong>DUE: Sunday, 1/21 by 11 pm</strong></td>
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| 1/30 |   | □ Read Tomlinson  
□ Read Stein & Smith, Ch. 1, pp. 7-12  
□ Read Taylor  
□ Component 3: Learning segment objectives and rationale  
DUE: Sunday, 1/28 by 11 pm |
| 2/6 |   | □ Read Stein & Smith, Ch. 2, pp. 13-20  
□ Component 4: Culminating Assessment and Rubric  
DUE: Sunday, 2/4 by 11 pm |
| 2/13 |   | □ Read Lambdin & Walcott  
□ Read Skinner, p. 95 only  
□ Component 5: Learning Calendar  
DUE: Sunday, 2/11 by 11 pm |
| 7  | 2/20 | Teaching for social justice and Culturally Relevant Teaching as related to tasks and curriculum | TERC. Checklist: Goals for Productive Discussions and Nine Talk Moves. Stein, M. K., & Smith, M. (2011). *5 Practices for Orchestrating Productive Mathematics Discussions*. You will be assigned an additional article to read and we will jigsaw in class. | ☐ Read TERC ☐ Read Stein & Smith, Ch. 5 & 6, pp. 43-74 ☐ Read assigned article ☐ Component 6: Elaborated Lesson Plan DUE: Sunday, 2/18 by 11 pm |
| 8  | 2/27 | Teaching for social justice and Culturally Relevant Teaching as related to tasks and curriculum | Stein, M. K., & Smith, M. (2011). *5 Practices for Orchestrating Productive Mathematics Discussions*. You will be assigned an additional article to read and we will jigsaw in class. | ☐ Read Stein & Smith, Ch. 3 & 4, pp. 21-42 ☐ Read assigned article ☐ Component 7: Math task debriefs DUE: Sunday, 2/25 by 11 pm |

**Readings (Available on Canvas)**


