



**EDUC 494**  
**Topics in Education**  
**CRN #29632**  
**Tuesdays**  
**4:00 pm – 5:30 pm**  
**Academic Hall 204**  
**Spring 2014**

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*Conceptual Framework Theme: Engaging diverse communities through leading and learning for social justice.*

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Hours:	Thursdays 10:00 – 11:00 am

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**School of Education Mission & Vision Statement**  
*(Adopted by SOE Governance Community, January 2013)*

*Vision*

To serve the educational needs of local, regional, and global communities, the School of Education advances innovative practice and leadership by generating, embracing, and promoting equitable and creative solutions.

*Mission*

The mission of the School of Education community is to collaboratively transform education. We:

- Create community through partnerships
  - Promote and foster social justice and educational equity
  - Advance innovative, student-centered practices
  - Inspire reflective teaching and learning
  - Conduct purposeful research
  - Serve the School, College, University, and Community
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**Basic Tenets of our Conceptual Framework**

- Student centered education
  - Research and theory specific to the program field inform practice
  - Connections and links between coursework and application
  - Strong engagement between faculty and candidates
  - Co-teaching clinical practice
  - Culturally responsive pedagogy and socially just outcomes
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## **COURSE DESCRIPTION**

Study of current issues in education. *May be repeated for credit as topics change for a total of six (6) units in any combination of units from EDUC 494, 495, and 496. Students should check the Class Schedule for listing of actual topics.*

DeRoma: The course is designed for students serving as Learning Assistants (LAs), Teaching Assistants (TAs), and Supplemental Instructors (SIs) in undergraduate STEM courses. The course will help integrate educational theory, pedagogy, and practice. It will touch on theoretical issues such as conceptual development, conceptual change, collaborative learning, technology in education, and students' conceptions of various topics in mathematics and science. It will also focus on practical issues encountered in facilitating learning, managing the classroom, formative and summative assessment, curricula development, and differentiating instruction in a collaborative environment. This is a seminar-style course where students are responsible for weekly readings, in-class discussions, and project presentations all based on the LA, TA, or SI field placement.

### **Course Prerequisites**

Accepted as a CSUSM LA, TA, or SI for Spring 2014.

### **Required Texts**

Weekly course readings will be available online through Cougar Courses (CC).

## **STUDENT LEARNING OUTCOMES**

As a result of this course, students will be able to:

- Identify univocal vs. dialogic discourse in a STEM classroom
- Apply appropriate questioning strategies in their work as an LA, TA, Tutor, or SI
- Describe the role of formative assessment and the importance of eliciting student thinking in the STEM classroom
- Utilize student preconceptions to design learning/teaching scenarios
- Manage group investigations related to a topic/concept in their fields of expertise
- Evaluate student activity to recognize examples of "doing science" vs. "doing school"
- Identify the intellectual activity of STEM teaching, including the ongoing opportunities to do math or do science as a teacher

## **GENERAL CONSIDERATIONS**

### **All University Writing Requirement**

All CSU students must demonstrate competency in writing skills as a requirement for graduation. At California State University San Marcos, students complete the graduation writing assessment through the All-University Writing Requirement. This requirement mandates that every course at the University must have a writing component of at least 2,500 words (approximately 10 pages). The assignments for this course meet this requirement.

### **CSUSM Academic Honesty Policy**

"Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All written work and oral presentation assignments must be original work. All ideas/materials that are borrowed from other sources must have appropriate references to the original sources. Any quoted material should give credit to the source and be punctuated with quotation marks.

Students are responsible for honest completion of their work including examinations. There will be no tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty in accordance with the general rules and regulations of the university. Disciplinary action may include the lowering of grades and/or the assignment of a failing grade for an exam, assignment, or the class as a whole."

Incidents of Academic Dishonesty will be reported to the Dean of Students. Sanctions at the University level may include suspension or expulsion from the University.

### **Plagiarism:**

As an educator, it is expected that each candidate will do his/her own work, and contribute equally to group projects and processes. Plagiarism or cheating is unacceptable under any circumstances. If you are in doubt about whether your work is paraphrased or plagiarized see the Plagiarism Prevention for Students website <http://library.csusm.edu/plagiarism/index.html>. If there are questions about academic honesty, please consult the University catalog.

### **Students with Disabilities Requiring Reasonable Accommodations**

Candidates with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disable Student Services (DSS). This office is located in Craven Hall 4300, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Candidates authorized by DSS to receive reasonable accommodations should meet with their instructor during office hours or, in order to ensure confidentiality, in a more private setting.

### **Use of Technology**

Candidates are expected to demonstrate competency in the use of various forms of technology (i.e. word processing, electronic mail, Moodle, use of the Internet, and/or multimedia presentations). Specific requirements for course assignments with regard to technology are at the discretion of the instructor. Keep a digital copy of all assignments for use in your teaching portfolio. All assignments will be submitted online, and some will be submitted in hard copy as well. Details will be given in class.

### **Electronic Communication Protocol**

Electronic correspondence is a part of your professional interactions. If you need to contact the instructor, e-mail is often the easiest way to do so. It is my intention to respond to all received e-mails in a timely manner. Please be reminded that e-mail and on-line discussions are a very specific form of communication, with their own nuances and etiquette. For instance, electronic messages sent in all upper case (or lower case) letters, major typos, or slang, often communicate more than the sender originally intended. With that said, please be mindful of all e-mail and on-line discussion messages you send to your colleagues, to faculty members in the School of Education, or to persons within the greater educational community. All electronic messages should be crafted with professionalism and care.

Things to consider:

- Would I say in person what this electronic message specifically says?
- How could this message be misconstrued?
- Does this message represent my highest self?
- Am I sending this electronic message to avoid a face-to-face conversation?

In addition, if there is ever a concern with an electronic message sent to you, please talk with the author in person in order to correct any confusion.

## **COURSE REQUIREMENTS AND GRADING STANDARDS**

### **Key Assignments**

This course is a seminar, and its success will depend on the active participation of all members in helping to shape its ultimate content and relevance. Our primary activity will be in-depth discussions of course topics and readings. Requirements include the following:

1. *Class Discussion/Participation (20%)* – Class members are expected to contribute to class discussions. The purpose of these discussions is to help us as individuals, and as a group, develop meaningful interpretations of the ideas conveyed by the readings, and to make connections to the class members' teaching experience. There will be weekly questions regarding the assigned article(s). The expectation is that students are attending every class session and participating in the discussions.
2. *Weekly Reading Reflections (15%)* – Each class member is expected to answer a collection of questions based on the weekly article reading. Post responses to CC.
3. *Weekly Teaching Reflections (15%)* – Each LA is expected to spend approximately 5-7 hours per week working with STEM undergraduates in collaborative, learner-centered environments. Using this experience as a guide, fill out weekly teaching reflection questions. Post responses to CC. These reflections may be shared with the CSM lead faculty; however, LA names – not departments/courses – will be removed.

**\*\*NOTE\*\*** After several weeks, if you have only interacted with a handful of students (and/or mainly on an individual basis), contact your LA course instructor (me).

4. *Interview / Peer Observation (30%)* – (A.) Each LA will be required to conduct an interview to practice questioning and to better understand a peer’s ideas about a scientific or mathematical concept. Results of this interview will be written up and used in class discussions and submitted to the course instructor. (B.) In addition, each LA will complete and submit a written summary of a field observation of another LA. During the LA Seminar, you will also have a consultation session with the LA you observed. (Likewise, you will also be observed and participate in a consultation session.)
5. *Weekly Meetings with Lead Faculty in Mathematics and Science to Plan Instruction (20%)* – Each week, LAs are responsible for meeting with the CSM lead faculty to plan and reflect on instruction and to discuss student achievement. Students cannot pass the LA Seminar course if they fail to meet with the Lead Instructor each week.

**\*\*NOTE\*\*** If you find that your Lead Instructor is not meeting with you, notify your LA course instructor immediately so that this can be corrected.

#### **Grading**

Course grades will be based on the following grading scale:

A	.....	Excellent	.....	90	–	100%
B	.....	Above Average	.....	80	–	89%
C	.....	Average	.....	70	–	79%
D	.....	Below Average	.....	60	–	69%
F	.....	Failing	.....	less than 60%		

Unless *prior arrangements* have been agreed to with the instructor, work submitted late, but within one week of the due date will be reduced by one letter grade, and work received over one week late will receive no credit.

#### **School of Education Attendance Policy**

Due to the dynamic and interactive nature of courses in the School of Education, all students are expected to attend all classes and participate actively. At a minimum, students must attend more than 80% of class time, or s/he may not receive a passing grade for the course at the discretion of the instructor. Individual instructors may adopt more stringent attendance requirements. Should the student have extenuating circumstances, s/he should contact the instructor as soon as possible. (*Adopted by the COE Governance Community, December, 1997.*)

## TENTATIVE\* SCHEDULE

Date	Topic	Reading/Assignment (To be completed BEFORE class)
Week 1 1/21/14	Introduction to Being an LA	LA Entrance Survey
Week 2 1/28/14	Classroom Discourse: Dialogic versus Univocal	Knuth, E., & Peressini, D. (2001). Unpacking the nature of discourse in mathematics classrooms. <i>Mathematics Teaching in the Middle School</i> . 6(5). 320-325. Week 1 Teaching & Reading Reflections
Week 3 2/4/14	Questions and Questioning Strategies (Discuss protocol for LA interview)	Trowbridge, L. W., Bybee, R. W., & Powell, J. C. (2000). Questioning and discussion. In <i>Teaching secondary school science: Strategies for developing scientific literacy</i> (1st ed). Upper Saddle River, NJ: Merrill. <b>LA Contract – signed by professor</b> Week 2 Teaching & Reading Reflections
2/11/14	Learning Theory I: Mental Models	Redish, E. (1994). Implications of cognitive studies for teaching physics. <i>American Journal of Physics</i> . 62(9). Week 3 Teaching & Reading Reflections
Week 5 2/18/14	Formative Assessment Guest Speaker: Dr. Ed Price	Black, P., Harrison, C. (2010). Formative Assessment in Science. In <i>Good Practices in Science Teaching: What Research Has to Say</i> . Open University Press. Week 4 Teaching & Reading Reflections
Week 6 2/25/14	Mindsets (Discuss protocol for LA observation)	Dweck, C. (2008). Mindsets and Math/Science Achievement. <i>Carnegie Corporation of New York-Institute for Advanced Study Commission on Mathematics and Science Education</i> Week 5 Teaching & Reading Reflections <b>Summary of LA Interview Assignment</b>
Week 7 3/4/14	Student Ideas in Content Areas	See miscellaneous articles posted on CC relevant to topic areas. Week 6 Teaching & Reading Reflections
Week 8 3/11/14	Cooperative Learning & Motivation	Frey, N., Fisher, D., Everlove, S. (2009). Defining Productive Group Work. In <i>Productive Group Work</i> . Alexandria, VA: ASCD. Frey, N., Fisher, D., Everlove, S. (2009). Promoting Face-to-Face interactions. In <i>Productive Group Work</i> . Alexandria, VA: ASCD. Week 7 Teaching & Reading Reflections
Week 9 3/18/14	Metacognition (Debrief observations)	Schoenfeld, A. (1987). What's all the fuss about metacognition? In A. Schoenfeld (Ed.) <i>Cognitive Science and Mathematics Education</i> (pp. 189-215). Hillsdale, NJ: Lawrence Erlbaum Associates. Week 8 Teaching & Reading Reflections
Week 10 3/25/14	LA Celebration & Recruitment Event	Week 9 Teaching & Reading Reflections <b>Summary of LA Observation Assignment</b>
<b>SPRING BREAK</b>		

Date	Topic	Reading/Assignment (To be completed BEFORE class)
Week 11 4/8/14	Argumentation	Jimenez-Aleixandre, M., Rodrigues, A., & Duschl, R. (2000). "Doing the lesson" or "doing science": Argument in high school genetics. <i>Science Education</i> , 84, 757-792. Abridged. Week 10 Teaching & Reading Reflections
Week 12 4/15/14	The Nature of Science/The Nature of Mathematics	McComas, W. (1997) 15 Myths of Science. <i>Skeptical</i> 5(2) 88-96. Week 11 Teaching & Reading Reflections
Week 13 4/22/14	Learning Theory II: Cognitive & Socio-Cultural Frameworks	Zull, J.E. (2002). The Art of Changing the Brain: Enriching the Practice of Teaching by Exploring the Biology of Learning. <i>Stylus</i> . Sterling, VA. Ch. 1-3. Lemke, J.L. (2001). Articulating Communities: Sociocultural Perspectives on Science Education. <i>Journal of Research in Science Teaching</i> . 38(3). 296-316. Week 12 Teaching & Reading Reflections
Week 14 4/29/14	Qualities of Effective Teachers & Differentiated Instruction	Stronge, J. H. (2002). <i>Qualities of effective teachers</i> . Washington, DC: ASCD. Tomlinson, C. A. (1999). <i>The differentiated classroom</i> . Washington. DC: ASCD. Week 13 Teaching & Reading Reflections
Week 15 5/6/14	Technology's Influence and Opportunities in Education	Berrett D. (2012) How 'Flipping' the Classroom Can Improve the Traditional Lecture. <i>Chronicle of Higher Education</i> Articles/videos from CC list Week 14 Teaching & Reading Reflections LA Exit Survey

\*This schedule is an approximation. Given the nature of the seminar, we will likely alter the scheduled topics (and possibly dates) in order to accommodate student interest and learning opportunities. In particular, reading assignments are likely to adjust as the class unfolds. Please check the course website regularly for updates to this schedule.