

UNIVERSITY OF CALIFORNIA, SAN DIEGO
EDUCATION STUDIES

EDS 39
Winter 2011

PRACTICUM IN SCIENCE & MATH TEACHING AND LEARNING

Instructor: Luz Chung
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Class meetings: Thursdays, 3:30-4:50 PM

Office Hours:
Tuesdays: 2:30-4:30 PM or by appointment

EDS 39 will provide students with the opportunity to examine some of the critical issues in today's middle schools and high schools within the context of math and science education. Through course lectures, discussions, and classroom observations, we will consider issues in teaching and learning in secondary schools such as: teaching for equity and social justice; addressing the varying academic needs of students; understanding culturally responsive teaching; working with diverse students; and current policies and mandates that frame K-12 public education.

READINGS

- Collection of articles on WebCT.
- Online resources.

COURSE EXPECTATIONS

In order to successfully pass this course, **you will need to complete ALL** the following requirements:

Due Dates

<p><u>Attendance and Participation</u> Your ongoing contribution to the EDS 39 class, through regular and punctual attendance, participation and contribution to class activities and discussions (including WebCT-based). Absences must be justified.</p>	Weekly
<p><u>K-12 Classroom Involvement and Reflections*</u> You are required to observe K-12 classrooms and be engaged in educational activities with the students in those classrooms. A total of 20 hours of classroom time is required. <u>Classroom Visits:</u> You will be visiting classrooms at 6 different schools (1 school/week). You must visit <u>all 6</u> schools. <u>Reflections:</u> You must record your observation(s) and thoughtful reflections in CalTeach, an online system. Each Reflection should make connections to at least one course reading each week. You must score at least 7/10 in each Reflection in order to satisfy this requirement. There are a total of <u>6 Reflections</u> (1 per school).</p>	Due by 6 PM on each Sunday of Weeks 4-9
<p><u>End of the Quarter Reflection</u></p>	Due on CalTeach by 4 PM on Friday, March 11, 2011
<p><u>K-12 Classroom Observation Log Sheet</u> You must record 20 hours of classroom observation/participation time.</p>	In my box by 4 PM on Friday, March 11, 2011

***Tuberculosis Test:** You are required to have the results of a current TB test (no older than 60 days) on file with EDS. You must submit your TB results during class no later than January 20, 2011. You may not start your classroom observations without your TB test results. For your convenience, Student Health Services conducts TB testing (<http://studenthealth.ucsd.edu>.)

COURSE OUTLINE AND READINGS
(Please bring the weekly readings to class)

Week 1

Thursday, January 6, 2011 Expectations and schooling: A personal perspective

Readings due (you will find them on WebCT):

- Humes, E. (2004). *School of dreams: Making the grade at a top American high school*. Fort Washington, Pennsylvania: Harcourt, Inc.
 - Pages: 83-96
- Kozol, J. (2005). *The shame of the nation: The restoration of Apartheid schooling in America*. New York: Three Rivers Press.
 - Pages: 89-108

Week 2

Thursday, January 13, 2011 Closing the “achievement gap”

Readings due:

- California Department of Education (2008). A Framework for Closing California’s Academic Achievement Gap (Executive Summary). **Read it online at:**
<http://www.cde.ca.gov/eo/in/pc/documents/yro8es0122.pdf>
- **WebCT:** Guilfoyle, C. (2006). NCLB: Is there life beyond testing? *Educational Leadership*, 64(3), 8-13.
- “Race to the Top” successfully incentivizes reform, Secretary of Education claims. As heard on National Public Radio, All Things Considered. 28 July 2010. **Listen to it online (audio file and transcript on website):**
<http://www.npr.org/blogs/thetwo-way/2010/07/28/128822057/-race-to-the-top-incentivizes-reforms-secretary-of-education-tells-npr>
- **WebCT:** Ladson-Billings, G. (2006). From the Achievement Gap to the Education Debt: Understanding Achievement in U.S. Schools. *Educational Researcher*, 35(7), 3-12.

Assignments due:

- WebCT discussion due by 6 PM, Wednesday, January 12, 2011
- Your Student “Map” due in class

Week 3

Thursday, January 20, 2011 Classroom observations: Learning from practice

Readings due:

- **WebCT:** Frank, C. (1999). *Ethnographic eyes: A teacher’s guide to classroom observation*. Portsmouth, NH: Heinemann.
 - Pgs. 82-93 (except last two sections on pg. 92: “Further inquiry into ideas” and “Activities to explore the ideas”)
- **WebCT:** Boud, D. (2001). Using journal writing to enhance reflective practice. *New Directions for Adult and Continuing Education*, (90), 9-18.

Assignment due:

- Metacognitive Markings

Week 4

Thursday, January 27, 2011 The student experience

Readings due:

- **WebCT:** Francisco Jiménez, “The Circuit,” from *The circuit: Stories from the life of a migrant child*. University of New Mexico Press, 1997, pp. 73-83.
- **WebCT:** Nakkula, M. (2006). Identity and possibility: Adolescent development and the potential of schools. In M. Sadowski (Ed.) *Adolescents at school: Perspectives on Youth, identity, and education* (pp. 7-18). Cambridge, MA: Harvard Education Press.
- **WebCT:** Raible, J. & Nieto, S. (2006). Beyond categories: The complex identities of adolescents. In M. Sadowski (Ed.) *Adolescents at school: Perspectives on Youth, identity, and education* (pp. 145-161). Cambridge, MA: Harvard Education Press.

Take a look at Wangenheim’s School Accountability Report Card (SARC) on the web:

- <http://studata.sandi.net/research/sarcs/2009-10/sarc328.pdf>

Assignments due:

- First Reflection due by 6 PM Sunday, January 30, 2011 on CalTeach website
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Week 5

Thursday, February 3, 2011 The teaching experience

All students are required to read the following (you will find the reading on WebCT):

- Nieto, S. (2003). *What keeps teachers going?* New York: Teachers College Press.
 - Chapter 1: Teaching as evolution (pgs. 9-21)

Jigsaw readings assigned by group (to be distributed in class)

- Nieto, S. (2003). *What keeps teachers going?* New York: Teachers College Press.
 - Chapter 3: Teaching as love (pgs. 37-52)
 - Chapter 6: Teaching as intellectual work (pgs. 76-90)
 - Chapter 7: Teaching as democratic practice (pgs. 91-106)
 - Chapter 8: Teaching as shaping futures (pgs. 107-120)

Take a look at Garfield's School Accountability Report Card (SARC) on the web:

- <http://studata.sandi.net/research/sarcs/2009-10/sarc361.pdf>

Assignments due:

- Group work with assigned Nieto's chapter (due in class)
 - Second Reflection due by 6 PM Sunday, February 6, 2011 on CalTeach website
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Week 6

Thursday, February 10, 2011 Equity and diversity

Readings due:

- **WebCT:** Nieto, S. (2010). *Language, culture, and teaching. Critical perspectives (2nd ed.)*. New York: Routledge.
 - pp. 217-221
- **WebCT:** Banks, J A. (2001). Diversity within unity: Essential principles for teaching and learning in a multicultural society. *Phi Delta Kappan*, 83(3), 196-203.
- **WebCT:** García, E.E. & Baquedano-López, P. (2007). Science instruction for all. *Language Magazine*, 6(6), 24-31.
- **WebCT:** Leedy, M G. (2003). Gender equity in mathematics: Beliefs of students, parents, and teachers. *School Science and Mathematics*. 103(6), 285-292.
- **WebCT:** Chang, B. & Au, W. (Winter 2007/2008). You're Asian, how could you fail Math? *Rethinking schools online*, 22(2).
- **WebCT:** Futrell, M. H. & Gomez, J. (2008). How tracking creates a poverty of learning. *Educational Leadership*, 65(8), 74-78.
- Read it online at: http://www.rethinkingschools.org/archive/22_02/math222.shtml
- Goldenberg, C. (2008). Teaching English Language Learners: What the research does—and does not—say. *American Educator*, 33(2), 8-44. **Read it online at:** <http://www.aft.org/pdfs/americaneducator/summer2008/goldenberg.pdf>

Take a look at Montgomery 's School Accountability Report Card (SARC) on the web:

- <http://studata.sandi.net/research/sarcs/2009-10/sarc316.pdf>

Assignments due:

- Key terms from readings (due in class)
 - Third Reflection due by 6 PM Sunday, Sunday, February 13, 2011 on CalTeach website
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Week 7

Thursday, February 17, 2011 Transformative teaching

Readings due:

- **WebCT:** Turner, E. E. & Strawhun B.T. (2006). "With math, it's like you have more defense." Students investigate overcrowding at their school. In E. Gutstein & B. Peterson (Eds.),

Rethinking mathematics: Teaching social justice by the numbers (pp. 81-87). Milwaukee, WI: Rethinking Schools.

- **WebCT:** Through this book review of *Radical equations: Civil rights from Mississippi to the Algebra Project*, you can get a glimpse of the Algebra Project, a program designed to help underserved, underrepresented students access Algebra.
 - Levine, D. (2006). *Radical equations*. In E. Gutstein & B. Peterson (Eds.), *Rethinking mathematics: Teaching social justice by the numbers* (pp. 90-96). Milwaukee, WI: Rethinking Schools.
- **WebCT:** Dhingra, K. (2004). How should science be taught in urban settings? In S. R. Steinberg & J. L. Kincheloe (Eds.) *19 urban questions: Teaching in the city* (pp. 41-51). New York: Peter Lang Publishing, Inc.

Recommended:

- The Algebra Project: <http://www.algebra.org/>
- The California Content Science Standards: <http://www.cde.ca.gov/be/st/ss/documents/sciencestnd.pdf>
- The California Content Math Standards: <http://www.cde.ca.gov/be/st/ss/documents/mathstandard.pdf>

Take a look at Gompers Preparatory Academy School Accountability Report Card (SARC) on the web:

- <http://www.gomperscharter.org/pdf/SARC/SARC%20Long%20Form%202008-09.pdf>

Assignments due:

- Fourth Reflection due by 6 PM Sunday, Sunday, February 20, 2011 on CalTeach website

Week 8

Thursday, February 24, 2011 School as an organization: Building learning communities

Readings due:

- **WebCT:** Friedrichsen, P. (2007). Strategies and Sources of Support for Beginning Teachers of Science and Mathematics. *School science and mathematics*, 107(5), 169-181.
- San Diego County Office of Education. (2010). Annual report to the community. **Read it online at:** <http://www.sdcoe.net/pdf/anrept.pdf>

Take a look at Miramesa High School's Accountability Report Card (SARC) on the web:

- <http://studata.sandi.net/research/sarcs/2009-10/sarc349.pdf>

Assignments due:

- Fifth Reflection due by 6 PM Sunday, Sunday, February 27, 2011 on CalTeach website

Week 9

Thursday, March 3, 2011 Classroom management

Readings due:

- **WebCT:** Brown, D F. (2003). Urban teachers' use of culturally responsive management strategies. *Theory into Practice*, 42(4), 277-282.
- **WebCT:** Weinstein, C., Tomlinson-Clarke, S., & Curran, M. (2004). Toward a conception of Culturally Responsive Classroom Management. *Journal of Teacher Education*, 55(1), 25-38.

Take a look at Crawford's School Accountability Report Card (SARC) on the web:

- MVAS: <http://studata.sandi.net/research/sarcs/2009-10/sarc703.pdf>
- CHAMPS: <http://studata.sandi.net/research/sarcs/2009-10/sarc704.pdf>

Assignments due:

- Sixth Reflection due by 6 PM Sunday, Sunday, March 6, 2011 on CalTeach website

Week 10

Thursday, March 10, 2011 Final reflections