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Room 2456 Haley Center
Tuesdays 5:00 p.m. – 7:50 p.m.
August 17 – December 2, 2011

1. **Course Number:** CTSE 7970
   Course Title: Focus on Common Core State Standards in Mathematics Education
   Credit hours: 3 semester hours
   Prerequisites: None
   Co-requisites: None

2. **Date Syllabus Prepared:** Dr. Marilyn Strutchens prepared the syllabus on August 17, 2011.

3. **Text: See Resources.** A collection of journal articles, book chapters, and monographs that focus on the Common Core State Standards (CCSS) in mathematics education.

4. **Course Description:** This course is designed to help teachers review and critique the CCSS-M. They will also examine effective strategies for implementing the CCSS-M and providing professional development for teachers. Moreover, teachers will think about aligning curriculum, teaching, and assessment around the CCSS-M.

5. **Course Objectives:** As a result of this course, students will be better able to:
   1) Implement the CCSS-M.
   2) Provide professional development for other teachers focusing on implementation of the CCSS-M.
   3) Understand issues related to implementation of the CCSS-M across classrooms, schools, districts, and states.
   4) Understand how to align assessment practices to the CCSS-M.
   5) Share resources with other teachers related to implementation of the CCSS-M.

6. **Course Content and Schedule:**

8/23/2011	• Overview of the Course • Initiatives Related to the CCSS • Discussion of the PARCC Draft Model Content Frameworks for Mathematics
8/30/2011	**What is being said about the Common Core State Standards?** • Achieve, I. c. (2010). Comparing the Common Core State Standards in Mathematics to the Recommendations of the National Mathematics Advisory Panel. Achieving the Common Core. *Achieve, Inc*, Retrieved from EBSCO*host*. • Cobb, P., & Jackson, K. (2011). Assessing the Quality of the Common Core State Standards for Mathematics. *Educational Researcher*, 40(4), 183-185. Retrieved from EBSCO*host*. • Porter, A., McMaken, J., Hwang, J., & Yang, R. (2011). Common Core Standards: The New U.S. Intended Curriculum. *Educational Researcher*, 40(3), 103-116. Retrieved from EBSCO*host*. • Porter, A., McMaken, J., Hwang, J., & Yang, R. (2011). Assessing the Common Core Standards: Opportunities for Improving Measures of Instruction. *Educational Researcher*, 40(4), 186-188. Retrieved from EBSCO*host*. • Tienken, C. H. (2010). Common Core State Standards: I Wonder? *Kappa Delta Pi Record*, 47(1), 14-17. Retrieved from EBSCO*host*. **Summary is due.**

9/6/2011	**Implementing Common Core Standards** • Kober, N., Rentmer, D., & Center on Education, P. (2011). States' Progress and Challenges in Implementing Common Core State Standards. *Center on Education Policy*, Retrieved from EBSCO*host*. • Conference Board of the Mathematical Sciences (2011). Common standards and the mathematical education of teachers: Recommendations from the October 2010 forum on content-based professional development. Washington, D.C.: Conference Board of the Mathematical Sciences. • Science, and Mathematics Teacher Imperative/ The Leadership Collaborative (2011). *Common core state standards and teacher preparation: The role of higher education a discussion draft by the SMTI/TLC working group on common core state standards.* **Summary is due.**
9/13/2011	• Exploring Challenging Common Core Topics (Presentations)
9/20/2011	• Curriculum Alignment (Presentations)
9/27/2011	• Curriculum Alignment (Presentations)
10/04/2011	• Resource Exploration o Illustrative Mathematics Project (http://commoncoretools.wordpress.com/2011/01/16/the-illustrative-mathematics-project/) o MCCC Website (Not up yet) o Inside Mathematics (http://www.insidemathematics.org/) (See the Assignment Sheet.)
10/11/2011	• Curriculum Analysis Tool
10/18/2011	• Assessment and the CCSS-M o A Summary Report from the Conference "Moving Forward Together: Curriculum & Assessment and the Common Core State Standards for Mathematics" **Summary is due.**
10/25/2011	• Assessment and the CCSS-M
11/1/2011	• Teaching and the CCSS-M **Issue Brief is due.**
11/8/2011	• **Teaching and the CCSS-M** • Ten Recommendations For Professional Development In Line With The Common Core State Standards For Mathematics (CCSSM-Pd) • Ball, D., & Forzani, F. M. (2011). Building a Common Core for Learning to Teach: And Connecting Professional Learning to Practice. *American Educator*, 35(2), 17-21. Retrieved from EBSCO*host*. • Beckmann, S. (2010, 2011). From the Common Core to a Community of All Mathematics Teachers. *Mathematics Educator*. pp. 3-9. Retrieved from EBSCO*host.* • Ferrini-Mundy, J., Burrill, G., & Schmidt, W. H. (2007). Building teacher capacity for implementing curricular coherence: Mathematics teacher professional development tasks. *Journal of Mathematics Teacher Education*, 10(4-6), 311-324. doi:10.1007/s10857-007-9053-9. **Summary is due.**
11/15/2011	• Professional Development Plans (Presentations)
11/29/2011	• Professional Development Plans (Presentations)

7. Course Requirements and Evaluation:

To accomplish the goals and objectives we will participate in several activities over the semester. They cover roughly reading and discussing literature about CCSS-M, reading theoretical articles and other articles related to issues surrounding the CCSS, viewing classroom videos, and developing professional development guides.

We expect that each participant will contribute actively to discussions based on readings and other assignments. Grades will be based on level and quality of class and written work. **All assignments must be typewritten and double-spaced. Use size 12-font.** Points will be deducted from assignments for grammatical mistakes, typos, and spelling errors. Students should use APA Style when appropriate. The assignments will be graded on a point scale as follows:

Course Requirements and Assignments Assignment	Points
1. Article Reflections (4@ 25 points each)	100
2. Issue Brief	80
3. Exploring Challenging Common Core Topics (Presentations)	50
4. Curriculum Alignment (Presentations)	100
5. Resource Exploration	100
6. Professional Development Plan	70
Total	500

Final course grades will be assigned based on the percentage of possible points earned by students.

A 90% or above

B 80 % - 89%

C 70% - 79%

D 0% - 69%

Descriptions of Major Assignments

Article Reflections

Prior to each class meeting, students will be required to write a reflection related to articles that they read for homework. For each set of articles, students will write a four-page reflection. Students will use the APA Manual of Style as a reference as to how to reference the articles. Below is the information that students should include in the reflection.

1. Discuss the major points of the set of articles.
   - (i) Important terms
   - (ii) Themes that go across the articles
   - (iii) Major implications for mathematics education
   - (iv) Information you would share with teachers and/or administrators
2. Discuss questions that arose in your mind as you read the articles.
3. Reference information

Issue Brief

You will prepare an issue brief (eight to ten pages). The issue brief should focus on an issue related to the implementation of CCSS-M in the mathematics classroom. You must:

1) Define the issue in mathematics education.
2) Describe advantages and disadvantages of two or more suggested responses (or approaches); i.e., summarize major arguments,
3) Discuss the strengths and weaknesses of the related research studies.
4) Include, in APA format, a list of at least 6-8 key references.

Papers are assessed on quality of ideas, quality of writing, adherence to APA format, use of key sources, integration of ideas from other readings, class discussions, etc. You will discuss your paper in class 5 minutes).

Website Explorations

A. Inside Mathematics (http://www.insidemathematics.org/)
   1. Read the introduction to the website.
   2. Next click on the Tour of Inside Mathematics Button. Discuss the information that is available to users of the website.
   3. Then click on tools for educators:
      a. Choose a topic appropriate for your grade level.
      b. Complete the task.
         i. Is the task conceptually oriented or procedural?
         ii. What would a student gain by completing the task?
      c. Examine student work related to the task.
         i. What were common mistakes made by students related to the task?
         ii. What were strategies used by students to solve the problem?
         iii. What other materials were available to you related to the task?
   4. View a video appropriate to your grade level.
      a. What did you gain from viewing the video?
      b. How could you use the video in a professional development session?
   5. What did you find to be the most useful component of the site?
   6. How could this site be used to help with implementation of the CCSS-M?

B. Illustrative Mathematics Project (http://commoncoretools.wordpress.com/2011/01/16/the-illustrative-mathematics-project/)
   1. Read the introduction to the website and go to the Standards Tools
      a. Examine the Tools
      b. How can the tools be used in situations to help teachers understand the standards?
   2. What other information is available on the site?

C. MCCC Website (Not up yet)
   1. Examine the site.
   2. What kind of information is most useful?
   3. What would you share with others?

Exploring Challenging Common Core Topics (Students will receive a handout with instructions.)

Curriculum Alignment (Students will receive a handout instructions.)

Resource Exploration (Students will receive a handout instructions.)

Professional Development Plan (Students will receive a handout instructions.)

7. Class Policy Statements:

Participation: Students are expected to participate in all class discussions and participate in all exercises. It is the student's responsibility to contact the instructor if assignment deadlines are not met. Students are responsible for initiating arrangements for missed work.

Attendance/Absences: Attendance is required at each class meeting. If an exam is missed, a make-up exam will be given only for University-approved excuses as outlined in the *Tiger Cub*. Arrangement to take the make-up exam must be made in advance. Students who miss an exam because of illness need a doctor's statement for verification of sickness and should clear the absence with the instructor the day they return to class. Other unavoidable absences from campus must be documented and cleared with the instructor in advance.

Unannounced quizzes: There will be no unannounced quizzes.

Accommodations: Students who need accommodations are asked to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternative time can be arranged. To set up this meeting, please contact me by e-mail. Bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have an Accommodation Memo but need accommodations, make an appointment with the Program for Students with Disabilities at 1244 Haley Center, 844-2096 (V/TT).

Honesty Code: The University Academic Honesty Code and the *Tiger Cub* Rules and Regulations pertaining to *Cheating* will apply to this class.

Professionalism: As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College's conceptual framework. These professional commitments or dispositions are listed below:

- Engage in responsible and ethical professional practices
- Contribute to collaborative learning communities
- Demonstrate a commitment to diversity
- Model and nurture intellectual vitality

Other Resources

Alabama State Department of Education. (2010). *Alabama course of study mathematics: Building mathematical foundations of college and career readiness*. Montgomery, AL: Author.

Collins, A. M. (Ed.) (2011). *Using classroom assessment to improve student learning: Math problems aligned with NCTM and common core state standards*. Reston, VA: National Council of Teachers of Mathematics.

Common Core State Standards Initiative. (2010). Common core state standards for mathematics. Retrieved from http://corestandards.org.

Confrey, J., Maloney, A., & Nguyen, K. (2010). *The learning trajectory posters.* NC: Wireless Generation, Inc.

Graeber, A.O., Valli, L., & Newton, K. J. (2011). Case studies of real teaching: Upper elementary math lessons. Lanham, MD: Rowman & Littlefield Publishers, Inc.

National Council of Teachers of Mathematics (1989). *Curriculum and evaluation standards for school mathematics.* Reston, VA: Author.

National Council of Teachers of Mathematics (1991). *Professional standards for teaching mathematics*. Reston, VA: Author.

National Council of Teachers of Mathematics (1995). *Assessment standards for school mathematics*. Reston, VA: Author.

National Council of Teachers of Mathematics (2000). *Principles and standards for school mathematics*. Reston, VA: Author.

National Council of Teachers of Mathematics (2006). *Curriculum focal points for prekindergarten through grade 8 mathematics: A quest for coherence*. Reston, VA: Author.

National Council of Teachers of Mathematics (2009). *Focus in high school mathematics: Reasoning and sense making.* Reston, VA: Author.

National Council of Teachers of Mathematics (2009). *Making it happen: A guide to interpreting and implementing common core state standards for mathematics.* Reston, VA: Author.

Weiss, I. R. (2011, June). *Preparing the teacher work force for the Common Core Standards in Mathematics.* Presentation given at the Science and Mathematics Teacher Imperative National Conference, Portland, OR, June 8-10, 2011.