

Orientation Seminar, Math 299E 2 credits, Fall 2008

Instructor: Michael A. Lundin
Office: Bouillon Hall, Room 108 D
Phone: 963-1398
email: lundin@cwu.edu

Meeting Time: 2:00 – 2:50, Tues. & Thur.
Web Site: <http://www.cwu.edu/~lundin/courses.htm>
Meeting Place: Bouillon Hall, Room 110
Office Hours: 11:00–12:00 MTTHF or by Appt.

Students With Disabilities

Students with disabilities who wish to set up academic adjustments in this class should give me a copy of their “Confirmation of Eligibility for Academic Adjustments” from the Disability Support Services Office as soon as possible, so we can discuss how the approved adjustments will be implemented in this class. Students who need this form should contact the Disability Support Services Office in Bouillon 205 at dssrecept@cwu.edu or call 963-2171.

Texts

- (1) Washington State Standards
<http://www.k12.wa.us/CurriculumInstruct/Mathematics/RevisedStandards.aspx>
- (2) Transition Math Project Standards <http://www.transitionmathproject.org/standards/index.asp>
- (3) *Principles and Standards for School Mathematics* by the National Council of Teachers of Mathematics (NCTM). It is available online at www.nctm.org. You can get a trial membership for free (90–day);
- (4) Live Text: You will need to purchase this for your own use.

Supplies

graphing calculator such as a TI-83, paper 3-ring folder to store portfolio items

Course Description

This course is designed to introduce pre-service secondary teachers to the mathematics education program. Students will prepare to teach secondary mathematics lessons and teach activities. Students will begin construction of a mathematics education electronic portfolio in LiveText. The LiveText portfolio will be completed in Math 499E, at which point students must meet all the program, NCATE, NCTM, and Washington State Standards for secondary mathematics teachers.

Course Rationale

To meet the expectations for mathematics education for secondary teachers, students must be familiar with the *Professional Standards for Teaching Mathematics* (NCTM, 1991) statement:

To reach the goal of developing mathematical power for all students requires the creation of a curriculum and an environment that is very different from much of current practice. In particular secondary teachers must be proficient at

- selecting mathematical tasks to engage students’ interest and intellect;
- providing opportunities to deepen their understanding of the mathematics being studied and its applications;
- orchestrating classroom discourse in ways that promote the investigation and growth of mathematical ideas;
- using, and helping students use, technology and other tools to pursue mathematical investigations;
- seeking, and helping students seek, connections to previous and developing knowledge;
- guiding individual, small–group, and whole–class work.

Learner Outcomes: Students will compose lesson plans or activities and present them to demonstrate the following learner outcomes.

Learner Outcome	Assessment
Initiate Mathematics Education Proficiency Portfolios (MEPP)	Students will present electronic (LiveText) portfolios in which artifacts are lesson plans and reflections explain how those plans accomplish teaching the NCTM process standards.
<i>Teach</i> Problem-solving Using a Variety of Strategies	Students will prepare to teach problem-solving via well-constructed activities.
<i>Teach</i> Communication of Mathematical Understanding	Students will prepare to teach concepts and procedures using electronic tools such as web-based technology, mathematical software, presentation software, word-processing software for mathematics, and calculator-based technology.
<i>Teach</i> Mathematical Reasoning	Students will prepare teach logic of their mathematical conclusions using electronic tools such as web-based technology, mathematical software, presentation software, word-processing software for mathematics, and calculator-based technology.
<i>Teach</i> Making Connections	Students will prepare to teach connections between mathematical concepts and between real–world situations and mathematics using electronic tools such as web-based technology, mathematical software, presentation software, word-processing software for mathematics, and calculator-based technology.
<i>Teach</i> How to Use Mathematical Representations	Students will prepare to teach multiple representations of mathematical notions using electronic tools, such as web-based technology, mathematical software, presentation software, word-processing software for mathematics, and calculator-based technology.
<i>Teach</i> the use of technology, including calculators, mathematical software, presentation software, and technical word-processing software	Students will prepare to teach mathematical activities using technology, discovery methods, and/or hands–on materials.

Work and Assessment: Please remember that organization, neatness, legibility, and excellent writing count! Also remember, AND THIS IS EXTREMELY IMPORTANT, if you use ANY ONE’S WORK OTHER THAN YOUR OWN, YOU MUST DOCUMENT IT! This is especially the case when finding “hints” on the web! **You will receive 0 pts on any written work in which you used a source but failed to cite it (even if the information came from your MAMA!**

Lesson Plans, Activities, Essays

You will write a lesson plan, activity, or essay, each week, and these must be compiled in two portfolios: paper and electronic. The contents of your portfolios will be transferred to LiveText about mid quarter. Your lesson plans can be of any recognized form, but each plan must have (1) Standards; (2) Objectives; (3) Preparatory Set; (4) Brief Procedure; (5) Activity or “hook” (6) Assessment; (7) Materials; (8) Comments for improvement, if you taught from it! Each of the first seven sections of your plan should be timed, based on a 50 minute period. Each lesson plan should incorporate as many of the NCTM process standards as practical. Each lesson will be posted as one or more artifacts in LiveText.

Presentations

You will teach your Math 299E class, using your lesson plan. You may walk quickly through some parts of the plan, because your fellow students are much better prepared than will be your future high school students. However, you MUST demonstrate an activity embedded in your plan! You will be graded by your peers on your presentations on a three point scale: 0 pt—You were absent, speechless, or dead; 3pt—your presentation did not accomplish your objective; 4 pts—your lesson accomplished your objective; 5pts—your lesson accomplished your objective in a *memorable* way!

Note: Since evaluating your peers is part of this course, unexcused absences are not acceptable. You will be docked 2 percentage points from your final grade for each unexcused absence.

Reflections

For each of the Math 299E LiveText Standards, you will post a well-written one-paragraph reflection on the accompanying Lesson Plan, supporting how you have met the process standards!

Attendance and Professionalism

To fully benefit from this class, you must attend it! As you prepare to become a teacher, you need to become accustomed to setting a good example for students. Attendance demonstrates professionalism and dedication. High quality work and organization demonstrate professionalism, as well. In addition, work must be turned in on time to receive full credit. The instructor reserves the right to make final decisions on any extraordinary circumstances that may interfere with your ability to turn your work in on time. Finally, you will not receive a grade, if your LiveText portfolio is incomplete by the end of the 7th week of class (or as determined by the instructor).

Grades

Lesson Plans and Activities—approximately 65% of your grade

Exemplary (5 pts)	Proficient (4 pts)	Partially Proficient (3 pts)	Incomplete (0 pts)
Demonstrates exemplary preparation in teaching a standard.	Demonstrates proficient preparation in teaching a standard.	Demonstrates partially proficient preparation in teaching a standard.	Demonstrates incomplete preparation in teaching a standard.

Micro-lesson and Five Minute Oral Presentations—approximately 30% of your grade

Exemplary (5 pts)	Proficient (4 pts)	Partially Proficient (3 pts)	Incomplete (0 pts)
Demonstrates exemplary teaching to objectives	Demonstrates proficient teaching to objectives	Demonstrates partially proficient preparation in teaching to objectives	Demonstrates incomplete teaching to an objectives

What is good teaching?—approximately 5 % of your grade

Final Grading Scale

93-100%	90-92%	87-89%	83-86%	80-82%	77-79%	73-76%	70-72%	67-69%	63-66%	60-62%	<60%
A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Schedule

<p>Week 1</p> <p>Introduction NCTM Standards Washington State Standards Teaching to objectives Your viewpoint: What is Good Teaching?</p>	<p>Homework</p> <p>1)Download Washington State and TMP Standards 2) Write a micro-lesson based on the given standard. 3) Write an extremely well thought-out, 1 page single-spaced essay entitled, <i>What Is Good Teaching?</i></p>
<p>Week 2</p> <p>Using MS Equation Editor LP 1-Making Direct Instruction Rich Instruction 5 minute presentations</p>	<p>Homework</p> <p>Write a direct instruction LP, including as many process standards as possible.</p>
<p>Week 3</p> <p>LP-2 Problem-solving 5 minute presentations Hand in LP-1</p>	<p>Homework</p> <p>Write a problem-solving LP, including as many process standards as possible.</p>
<p>Week 4</p> <p>LP-3 Project 5 minute presentations Hand in LP-2</p>	<p>Homework</p> <p>Write a project LP, including as many process standards as possible</p>
<p>Week 5</p> <p>LP-4 Student Presentation 5 minute presentations Hand in LP-3</p>	<p>Homework</p> <p>Write a Student Presentation LP, including as many process standards as possible</p>
<p>Weeks 6</p> <p>5 minute (or more) presentations Hand in LP-4</p>	<p>Homework</p> <p>Turn in hard copies of portfolios</p>
<p>Week 7</p> <p>5 minute (or more) presentations</p>	<p>Homework</p> <p>All LifeText Portfolios must be complete!</p>
<p>Week 8-week 10</p> <p>5 minute (or more) presentations</p>	<p>Homework</p> <p>Presentation feedback</p>

Portfolio Hard Copy Contents

ITEM	EVALUATION						Points
0. This Content Sheet							1
1. Syllabus							1
2. What is good Teaching?							
3. Micro-lesson							
4. LP-1 Direct Instruction	PS	Comm	Reas	Conn	Rep	Tech	
5. LP-2 Problem Solving	PS	Comm	Reas	Conn	Rep	Tech	
6. LP-3 Project	PS	Comm	Reas	Conn	Rep	Tech	
7. LP-4 Student Presentation*	PS	Comm	Reas	Conn	Rep	Tech	
Average							
8. Presentation 1 (Rubric Average)							
9. Presentation 2 (Rubric Average)							
10. Presentation 3 (Rubric Average)							
Total							

NOTE: Shaded items must be placed in Math 299E LiveText Portfolio.

* If time permits.