Syllabus for TED 324
Content and Techniques of K-3 Mathematics II
University of Wisconsin-River Falls – Spring 2010

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Laurel Langford's Office Hours: Mon, Wed, Fri 1:00-2:00 and by appointment

Welcome to TED 323: I look forward to working with you this semester. Be sure to call during office hours if you have any questions. (If my office hours do not match your schedule be sure to connect after class, by phone, or by email to set up another time.)

Class Meetings: You must attend both the Saturday afternoon sessions on your scheduled class meeting days and virtually/or in person attend the Tuesday late afternoon sessions.

Required Texts (all available in the textbook library): Portions of these texts will be used for both TED 323 and TED 324 (probably)

Author: Thomas Carpenter
Title: Children's Mathematics Cognitively Guided Instruction (with CDs)
Publisher: Heinemann

Author: Susan Sperry Smith
Title: Early Childhood Mathematics, 4/E
Publisher: Pearson

Author: John A. Van de Walle
Title: Teaching Student-Centered Mathematics: Grades K-3
Publisher: Pearson

Author: Singapore Math texts
Title: Primary Mathematics Textbook 3 A, 3B, 2A
Publisher: Marshall Cavendish Education
Singapore Math texts

Provided Manipulatives Kit: Available from TED for use in both TED 323 and TED 324
Additions for the kit for Sat. and Tues. meetings: add these materials of your own and place in a ziplock bag and place in kit so always available during classtime or teaching:
Scissors, ruler, crayons or colored pencils, tape, glue stick, post-it notes

Course Description:
This course focuses on: 1) the mathematics taught in elementary schools both content and process and 2) how elementary-aged children learn mathematics. You will use a wide variety of instructional materials, including manipulatives and technology and also be actively involved in learning. You will have opportunities to apply ideas from class in the field and will be asked to reflect on your lesson planning and teaching.

Your field experiences will enable you to experience what it is like to teach and learn mathematics in an elementary school classroom. You will work closely with a mentor teacher and students. Your work this semester will focus on exploring the teaching of mathematics in ways that are respectful of and responsible to both students and content. You will strengthen your skills in thinking about

learning and teaching, including responding to students' mathematical ideas and ways of thinking, and planning, teaching, and analyzing mathematics lessons. This course will focus on the following: ***Mathematics content****:* You will be able to identify the major mathematical ideas that are important for the teaching of elementary, K-3. With a focus on topics recommended in *Principles and Standards for School Mathematics* (National Council of Teachers of Mathematics, 2000) and standards for the state of Wisconsin. By using teaching and learning strategies that align with current reform efforts, you will come to view mathematics as a sense-making activity, learn to assess children's mathematical thinking/understanding of mathematical concepts and procedures and plan instruction based upon those understandings. You will use methods that convey understanding of concepts and principles and not just rote memorization.

Mathematics Content Course Objectives: In this course you will...

- use appropriate mathematical language and symbols when discussing/presenting or writing about mathematics.
- describe relationships/connections between and among mathematical topics.
- solve mathematical and application problems based on the concepts presented in each topic area.
- create appropriate contextual problems for mathematics content.
- explain why various mathematical procedures/algorithms work, as well as carry out those procedures.
- use appropriate technology to model, interpret, and solve mathematical problems and to demonstrate concepts and principles.

The content we will focus most on is geometry and measurement.

Teaching techniques*:* You will develop lessons that focus on math content understanding. You will examine the role of the teacher in creating a learning environment in which all children can develop meaning for mathematics, including providing opportunities that encourage children to share and justify their thinking, ask questions, and make conjectures. You will learn to incorporate assessment into your teaching plans, and to use those assessments to guide instruction.

Teaching Techniques Course Objectives: In this course you will...

- analyze and anticipate children's approaches to mathematical problems.
- assess children's thinking as an ongoing part of instruction.
- develop an understanding of children's mathematical thinking and identify instructional methods and opportunities that support children's mathematical thinking.
- become reflective about students, student learning, teaching, and instructional strategies as they relate to elementary mathematics.
- be able to plan and teach mathematics concepts and principles using a variety of instructional materials, focusing on modeling with manipulatives.

Course Requirements:

This Course Schedule lists the major activities and assignments that will be accomplished (web page). The major requirements and their percentages of your total grade are as follows:

- 25% math homework assignments
- 25% math quizzes
- 25% math teaching homework and practice lesson plans
- 25% revised lesson plans for the lessons you teach, reflections, and the portfolio artifact.

Portfolio Assignment: In this class, the portfolio artifact you create will address Teacher Standard 6: **Teachers communicate well**. The teacher uses effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

Grading Policies:
To earn a C or better in this class, you must
* Attend and participate actively in all class sessions
* Complete and submit all required assignments in satisfactorily and in a timely manner
Final grades will be at least as high as those indicated by the following percents:

75-80%	C	81-83%	C+	84-85%	B-	86-89%	B	90-91%	B+
92-94%	A-	95-100%	A						

Disability Services: "UWRF welcomes students with disabilities into the University's educational programs, activities, and environment. Students who need academic adjustments (accommodations) for a disability should contact the Disability Services Office (105 Davee Library; 715-425-3531). Before final decisions can be made to allow academic adjustments, students must provide clinical documentation that sufficiently describes the nature of their situation. For further information, visit http://www.uwrf.edu/disabilityservices/ADA.html." Contact Mark Johnson, Coordinator of Disability Services, at ext. 3531 or mark.r.johnson@uwrf.edu.

Teacher Content Standards: DPI CONTENT STANDARDS: The State of Wisconsin has established content standards that education programs are required to have in their courses. These standards are the basis of the Praxis II Content exams that all licensure candidates are required to pass prior to receiving a license to teach in Wisconsin.
Copies of appendices C and D (correlating this course to Wisconsin teacher standards) are in the D2L Content section.

Frequently Asked Question: How do I apply for Admission to Teacher Education?
(from CAS website at www.uwrf.edu/cas/faqteach.php3)
"Information and forms are available on the web"
at http://www.uwrf.edu/college-of-education/forms.htm
"Dates and deadlines are listed" at: http://www.uwrf.edu/college-of-education/dates.htm