

SEDS 446: TEACHING MATHEMATICS IN THE MIDDLE/ SECONDARY SCHOOL

Syllabus

Instructor: Dr. Lou Matthews
Class times: TH 2:00—4:40 p.m. **Place:** Hodge Center, RM 250
Office: Media Building; RM 114 **Office Hours:** By appointment
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Course Description: SEDS 446 Teaching Mathematics in Secondary School

Organization, historical context, foundations for development, planning, design, and strategies for change of middle and secondary school curriculum. *Prerequisites: Admission to the professional program or consent of instructor.* Three semester hours awarded.

Required Text/ Materials:

National Council of Teachers of Mathematics. (2000). *Principles and Standards for School Mathematics*. Reston, VA: The Council. (With CD-ROM)

COURSE GOALS

In this course you will have the opportunity to:

- Examine your beliefs about the goals, nature and content of secondary school mathematics in relation to current reform perspectives.
- Foster your ability to create an instructional environment that promotes all students' learning of important mathematics concepts and processes with understanding.
- Explore the content, methods, software and materials (textbooks, resources, and manipulatives) to assist them in planning their elementary school mathematics curriculum.
- Create and implement innovative and reform-based mathematics lesson plans for middle and secondary teaching of mathematics.
- Foster the development of middle/secondary/ school students through providing mathematics tutoring services and gain insight into the ways in which students construct mathematical concepts and processes.

This course provides middle and secondary school teachers with an opportunity to examine middle and secondary mathematics teaching practices. The primary aim of this course is to help pre-service teachers develop the knowledge, dispositions, and performance required of successful mathematics teachers.

RESPONSIBILITIES

Class Responsibilities

Your participation in class activities and discussions is important not only for your own learning but also for the learning of others. Two unexcused absences may result in your being asked to withdraw from the course and lower your course grade one letter grade. Prior notice of all

absences is required. Medical emergencies will be handled on an individual basis. Work should be submitted during class on or before the date it's due.

ASSESSMENT

Participation:

It is expected that each member of the class will contribute to the class through discussion and presenting. Communicating your thinking is an important component in developing your understanding of classroom management and assessment.

Tutoring Service Project

Each student will be expected to work with D.R. Hill students in a one-on-one setting for approximately 10 hours over the course of the semester. Based on available times, a schedule will be compiled by D.R. Hill administrators. Students will be expected to keep a journal of their tutoring experiences

Teaching Assignments

- Lesson Plans
- Reflective Teaching Analyses
- Reflective writings

This course includes a 10-week field experience component in which you will work collaboratively and independently to observe, plan and teach lessons at D.R. Hill Middle School. You will also be asked to write two reflective teaching analyses of lessons taught or observed in the course of this experience. Period reflective writings concerning readings, activities, observations will also be required throughout the semester.

Mathematics Content Quizzes – Although most of this course will focus on developing your pedagogical knowledge, mathematics content knowledge is an equally important factor contributing to your effectiveness as a teacher. Therefore, two mathematics content quizzes will be given during the semester.

Final Exam

The final exam will be given on December 12 @ 8:00 am

Disability Concerns

Students with Disabilities: Accommodations for handicapping conditions will be honored. Students who have a physical or learning disability which might affect their performance should contact the USCS ADA Coordinator who will verify the problem and notify the instructor of any accommodation required.

Note:

Last day to withdraw without academic penalty - **November 6**

GRADING RUBRIC

EVALUATION

Course grades will be determined according to the following percentage weights:

Participation	10%
Tutoring Service Project	25%
Teaching Assignments	30%
Content Quizzes	15%
Final Exam	15%

Grading Scale:

A distribution of course grades from *A* to *F* is possible with the *A*'s being reserved for outstanding performance. **For each assignment a four-point rubric will be used [A=4, B=3, C=2, D=1]. A weighted average of these scores** will determine your grade. The following rubric describes the levels of performance typical of each grade in the course:

- A* *Outstanding performance (3.4 and above)*.. Student demonstrates solid conceptual understanding of course content and is able to make extensions or apply that knowledge to new situations, including teaching experiences. Assignments/reflections/project are excellent quality and the student contributes substantially to class discussions. The student demonstrates a thorough understanding of 7-12 mathematics content.
- B* *Good performance (2.8-3.4)*. Student demonstrates good understanding of course content and is able to make extensions or apply that knowledge to new situations, including teaching experiences. Assignments/reflections/project are of good quality but not exceptional. The student contributes to the class discussion. Knowledge of 7-12 mathematics content is above average.
- C* *Adequate performance(2-2.7)*. Student demonstrates adequate understanding of course content but has difficulty extending or applying the knowledge to new situations or teaching experiences. Assignments/reflections/project are adequate. Student shows weak development toward becoming a teacher. Knowledge of 7-12 mathematics content is average.
- D* *Unacceptable performance (1.4-1.9)*. Student demonstrates poor understanding of the course content. Either some assignments are not completed or are late or of poor quality. The student does not contribute to class discussion and shows minimal development toward becoming a teacher. Knowledge of 7-12 mathematics content is poor.
- F* *Unacceptable performance (<1.4)*. Student demonstrates little to no understanding of the course content or fails to complete a majority of the assignments. Knowledge of 7-12 mathematics content is inadequate.