

**COURSE OUTLINE- EMAT 7/5310**  
**Teaching Mathematics in the Middle School**  
**Fall 2000**

Instructor: Nicholas K. Oppong  
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Classroom: 112 Aderhold Hall  
Meeting Times: 1:25—2:15 MWF  
Graduate Assistant: Jongsuk Keum

Course Description: Methods and materials for teaching mathematics in the middle school, with emphasis on integration of mathematical topics.

**Goals**

Students will be able to plan and teach lessons that implement the NCTM Principles and Standards. Specifically, these mathematics lessons will include attention to relevant mathematical topics, the integration of mathematics topics, appropriate use of technology, concerns for equity, and effective assessment.

Students will develop their own teaching philosophy and strategies for reflecting on their own teaching and the teaching of others.

Students will increase their understanding of mathematics.

Students will develop their own area of interest and expertise related to teaching mathematics.

Students will form networks, communities, and working relationships that will support their growth as professionals.

**Instructional Materials Source List**

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

National Council of Teachers of Mathematics, Commission on Teaching Standards for School Mathematics. (1991). *Professional standards for teaching mathematics*. Reston, VA.: The Council.

National Council of Teachers of Mathematics, Commission on Standards for School Mathematics. (1995). *Assessment standards for school mathematics*. Reston, VA.: The Council.

Johnson, D. (1982). *Every minute counts. Making your math class work*. Palo Alto, CA.: Dayle Seymour Publications.

## Sample Activities/Projects

Learn teaching skills: lesson planning, assessment, class management, working in groups, integrating mathematical topics, integrating technology.

Work in schools: observation & reflection, journals, working with mentor teachers, teach an enrichment lesson, and assess student's understanding.

Attend Conferences and Colloquia: You will have opportunity to attend GCTM conference from October 19-21, 2000. There will be several MESA colloquia that you may attend.

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Use technology: learning mathematics, teaching mathematics, design technology-enriched lessons, prepare reports, write journals.

Reading: NCTM's Principles and Standards, NCTM's Professional and Assessment Standards, class handouts, Mathematics Teaching in the Middle School and other reading materials in area of interest.

***CTL Case Study: Investigate What Knowledge, Skills, and Dispositions are Necessary To Prepare Students For the Work Force. You will visit McLane Industries during the week of October 2-6, 2000. You will pose mathematics problems related to the workplace, sketch the solution of problem, reflect on the problem and it's solution, pose related problems, and propose teaching strategies***

Develop electronic portfolio: materials for employment, materials for teaching, materials for professional growth.

## Attendance

All students are responsible for maintaining the highest standards of honesty and integrity in every phase of their academic careers. The penalties for academic dishonesty are severe and ignorance is not an acceptable defense. Participation in class discussions will be an important component of this course. One emphasis of this course is your professional development. Part of being a professional educator is being a good student. Being a good student involves more than just coming to class and completing assignments. It includes demonstrating a professional demeanor while in class and attending conferences and colloquia. No rude or disrespectful behavior will be tolerated during class meetings or while attending conferences and colloquia. Disagreement during professional discussions is good and often productive in developing a deeper understanding of the concepts being discussed. Disagreement in a discussion does not warrant yelling or disrespectful language or behavior. Repeated demonstration of unprofessional demeanor during class or while attending conferences and colloquia may drop your grade or you may be withdrawn from the course. Regular and punctual attendance is expected. Excessive absences

(3 or more hours) without excuse will drop your grade or you may be withdrawn from the course.

## Evaluation

<u>Item</u>	<u>Points</u>
Participation/ Reflections/ Quizzes/Assignments	10
Conference/Colloquia Report	20
Field Experience Report	25
<b><i>CTL Project</i></b>	<b>20</b>
Final Project/Final Exam	25