

MAT 220 Explorations in the Mathematics Classroom

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PREREQUISITES: Math Licensure major; required for math licensure students

TEXT: None

COURSE OVERVIEW AND PROFESSIONAL EDUCATION STATEMENT: This course is the first of the series of courses offered through the Mathematics Department aimed at addressing the USM Professional Education Unit of Vision of creating a community of learners who value the power of knowledge to inform, inspire and transform lives. The overarching theme of the NCATE Conceptual Framework is “Freeing the Power of the Individual” and is by design aligned with the university’s vision and mission. Within these mission statements, the Unit has embedded the knowledge, skills, and dispositions to enable them to prepare effective leaders to serve a variety of roles in the P-12 setting.

COURSE GOALS:

1. Foster the transition between student to teacher
2. Provide novice mathematics licensure students with an initial classroom field experience.
3. Verify student’s choice of career path/
4. Help student’s recognize and appreciate the diverse ways technology can be used as a teaching/learning tool.
5. Familiarize pre-service teachers with state and national curriculum standards.

COURSE OBJECTIVES;

Students will:

Observe, tutor and assist secondary mathematics classroom teachers (INSTAC 9, 10)

Develop an understanding of the routines and methods of teaching mathematics (INSTAC 1)

Participate in the routines and methods of classroom management (INSTAC 5)

Begin understanding the reform movement in mathematics education through national and state standards (INSTAC 7)

Develop knowledge for incorporating technology (INSTAC 4)

TEACHING AND TECHNOLOGY INTEGRATION

There will be limited teaching strategies as the primary focus is observation in the public school classrooms. During the seminar discussion topics will include lectures, demonstrations, cooperative learning, and exploration with appropriate technology including graphing calculators, spreadsheets and PowerPoint.

EVALUATION: At this time the course is set as P/NP final grade. A variety of evaluative assessments will be used including student journals, seminar presentations, factual and opinion discussions, reading and written reports. Modeling of teaching strategies is not the emphasis but rather reporting and discussing those observed in the classrooms. All reports and observations forms are due at the latest before the last week of school.

Class Meetings: 3 seminars 1 -2 hours for a total of 5 hours – Attendance is Mandatory!!

1st _____ 2nd _____ 3rd _____

ADA STATEMENT: If a student has a disability that qualifies under the Americans with Disabilities Act, he/she should contact the Coordinator of the Office of Disability Accommodations (ODA) for information on the appropriate policies and procedures **VOICE** TDY 214-3232 **FAX**867-8762

ASSIGNMENTS:

Due 2nd meeting

1. Go to www.NCTM.org or Marco Polo site.
Select "Illuminations". Choose either 6-8 grades or 9-12 grades. Find an activity appropriate for a classroom (7-12) and outline a brief (5-10) minute explanation/presentation to be shared with the seminar group. Provide a handout for everyone (you will need 4) including topic, grade level, brief description and information requested in #2 and #3 below.
2. NCTM Standards
List the NCTM standard(s) on the appropriate grade level that covers the topic you selected. Include expectation(s) for the standard that relates to your topic.
3. Mississippi Framework
List the Content and/or Process Strand(s) that relate to your selected topic. Then list the Competencies and Objectives relating to your topic.

During 3rd meeting

Be prepared to discuss and example of a situation that occurred during one of your observations related to classroom management or discipline. How did the teacher deal with the situation? If there were no evidence of a negative situation, describe aspects of the management scheme observed that reduced the probability of negative occurrences. How would you handle the situation or organize your class procedures and environment to maintain positive behavior? What type of "rewards" or positive reinforcement could be used to improve management in the classroom?

Other topics for discussion:

What are the positive aspects of teaching as a career? Negative aspects?

Other?

MAY 220 OBSERVATION REPORT FORM

NAME: _____

OBSERVATION DATE: _____

SCHOOL: _____

CLASS HOURS: _____

COURSE OBSERVED: _____

TEACHER SIGNATURE: _____

What was the main idea or concept of the lesson?

How did the teacher begin the lesson?

Describe the teaching method(s) used.

Describe the students' activities.

How was the class organized? (Small groups? Whole class? One-on-one? Etc.)

What did the teacher do to determine if the students understood the lesson?

Describe the physical layout of the classroom. Did this contribute to student behavior (both + and -)?

On a separate sheet write a reflection on this observation. Include your feelings and/or impressions relating to this experience, things you might do differently and your general opinion of both the learning environment and the process.