

Course Syllabus
Southeast Missouri State University

Department of Mathematics
Title of Course: Internship in Numbers and Operations

Course No. MA 611
New: Fall 2013

I. Catalog Description and Credit Hours of Course:

Supervised teaching practicum and online seminars in which candidate acquires experience working with a range of students and adult learners on Number and Operations concepts. (1)

II. Co-requisite:

MA621 Numbers and Operations

III. Purposes and Objectives of the Course:

This course is a supervised mathematics teaching practicum in which candidate acquires experience working with a range of student and adult learners including elementary students (e.g., primary, intermediate, struggling, gifted, English language learners) and elementary school teachers, both novice and experienced, in a variety of professional development settings. The mathematical focus of this practicum is Number and Operations concepts.

The primary objectives of the course are to:

- A. Identify the developmental stages of young learners through observation and interviewing, and develop appropriate learning experiences.
- B. Work with parents/guardians and others in the community to foster support for students' learning of mathematics.
- C. Collaborate with individual teachers through co-planning, co-teaching, and/or coaching.
- D. Facilitate teachers' use of successful, research-based strategies.
- E. Construct and evaluate multiple representations of mathematical ideas or processes, establish correspondences between representations, and understand the purpose and value of doing so.
- F. Analyze and evaluate student ideas and work, and design appropriate responses.
- G. Develop skillful and flexible use of different instructional formats—whole group, small group, partner, and individual—in support of learning goals.

IV. Student Learning Outcomes:

- A. Student will demonstrate a greater understanding of how to teach and apply the mathematics of numbers and operations in a classroom setting.
- B. Student will effectively communicate their mathematics related classroom experiences gained during the internship
- C. Student will effectively evaluate the impact of the internship on themselves and their classrooms.

V. Expectations of Students:

Working with Students:

- A. Interview 5 students using the numbers and operations interview protocol provided. If possible video tape or record the interviews to assist in your analysis. Write a reflective paper about what you learn. Design an instructional sequence based on your observations for each of the five students.
- B. Based on your own classroom experiences, write a case study. The format will be similar to the cases presented in the Number and Operations course. Further details will be provided in class.

- C. Collect number and operations related work from 4 students in your class. Two of these should be from students whose work you feel is strong. The other two should be from students whose work is not strong. For each piece of work, write a reflection that describes the strengths and weaknesses noted in the work.
- D. Choose 3 of the Standards for Mathematical Practice on which to focus this semester. Develop a plan for how you will help students develop these practices. Implement your plan and then reflect on the process and results.
- E. Keep a weekly journal of your experiences in teaching number and operations concepts to students in your classroom. What are you learning about your students and yourself as a teacher?

Working with Adults:

- A. Plan a mathematics enrichment or outreach activity for your school. (Parent Math Night, Math Club, Math Carnival, etc.) Submit your plan and a reflection on how the activity impacted your students and school.
- B. Lead 2 other teachers in analyzing student work. You may choose to all implement the same task in your classrooms and then analyze the work together. More details will be provided in a separate handout.

VI. Course Outline:

Topics	Class Hours
A. Analyzing tasks	4
B. Analyzing student work	4
C. Standards for Mathematical Practice	3
D. Planning and implementing mathematical activities	<u>4</u>
	15

VII. Textbook:

None

VIII. Basis of Student Evaluation:

A. Online participation	15 %
B. Improvement Plans	25 %
C. Lesson Studies	60 %

IX. Grading Scale

90% - 100% = A
 80% - 89% = B
 70% - 79% = C
 0% - 69% = F

The weight of the evaluation criteria may vary according to each instructor and will be communicated at the beginning of the course.

X. Academic Policy Statement:

Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honesty. Refer to:

<http://www6.semo.edu/judaffairs/code.html>

XI. Student with Disabilities Statement:

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.