

Syllabus for Mathematics Students in MATH 401 – Spring 2009
Department of Mathematical Sciences
40+ Clock Hours of Clinical Experience (1 semester hour)

Instructor: Mrs. Cindy Stecher

Instructor's Office: Watson 364 **Office Phone Number:** (815) 753-6762 **E-mail:** stecher@math.niu.edu

Office Hours: Monday through Thursday, 2:15 – 3:30 p.m. or by Appointment

Instructor: Ms. Pat Reisdorf

Instructor's Office: Watson 372 **Office Phone Number:** (815) 753-6746 **Email:** reisdorf@math.niu.edu

Office Hours: Mon & Wed 10:00 – 11:30 a.m., Tues & Thurs 1:00 - 2:30 p.m. or by Appointment

**To access resources from NIU's Center for Access-Ability Resources Office call 753-1303 or at www.niu.edu/caar.
Let Cindy Stecher or Pat Reisdorf know what accommodations you need.**

Course Title and Number: Clinical Secondary School Experience in Mathematics – MATH 401

Course Description: A 40+ hour clinical experience at the school in which the student will be doing his/her student teaching during the following semester. During experience student should observe teaching styles of the cooperating teachers, learning styles of students, familiarize himself/herself with the student teaching school, phase into an active teaching role, engage in self evaluation and receive feedback from the cooperating teacher.

Course Objectives:

1. Further develop an initial philosophy of teaching.
2. Identify and observe learning and teaching styles in their major field.
3. Discuss with cooperating teacher their teaching philosophy, organizational techniques (esp. for paper work), lesson planning, record keeping, grade recording, classroom procedures, working with special needs students, NCLB, etc.
4. Observe and practice correlating the teacher's instructional methods with students' learning styles.
5. Observe strategies for establishing a positive & productive learning environment perhaps at beginning of year.
6. Observe students and teachers solving problems together and discussing their solution strategies.
7. Create and implement lesson plans using a variety of instructional methods and resources.
8. Observe teacher's and then practice questioning & informal assessment techniques in order to gain student feedback.
9. Develop ways to motivate students to learn math concepts through applications.
10. Observe and perhaps begin to implement appropriate uses of technology in the classroom.
11. Adapt lessons to meet the needs of students' different learning styles.
12. Observe, discuss with teachers, develop and practice classroom & time management techniques (inc. sharing your Math 412 Classroom Management Plan with c. t.), attendance procedures, grading homework, recording grades, etc.
13. Establish a professional working relationship with colleagues in the math department and, if possible, attend dept. meetings & parent conferences.
14. Become knowledgeable about school facilities & contact resource people such as counselors, deans, special education faculty and secretaries.
15. Prepare for a smooth transition to student teaching & a quick phase-in to the teaching of a "full-load."
16. Become familiar with the structure (flow) of the math curriculum, read the textbooks and do the homework of the courses you will be teaching, look at unit/semester plans of cooperating teacher and math department.

Content:

You will spend a **minimum of 40 hours (preferably 50+ hours)** in the school setting where you are going to student teach the following semester. During this time you will familiarize yourself with the school's mathematics curriculum, school policies & facilities (inc. technology), and the math faculty & school administration personnel. During your observations of your cooperating teacher(s) you should watch, discuss with them and reflect on their teaching philosophy, instructional, motivational and classroom management strategies, the correlation between their teaching strategies & the learning styles of the students, working with special needs students, lesson planning (inc. semester, chapter & daily and prioritization of topics), organizational techniques and use of technology (if applicable), NCLB & standardized testing. **After about 5 hours at the school you should begin to interact with the students** – first on a one-to-one basis, then in mini-teaching situations such as hwk review, and finally teaching several entire lessons using your own lesson plans. As you phase in to teaching, reflect on and then apply ways to adapt your lessons to fit different learning styles as well as "at risk" students & special needs students. As you plan and teach consider different methods of formative assessment such as questioning & informal written student responses and reflect on the usefulness of student feedback you get. The Coordinator of MATH 401 will observe you at least once during one of your teaching

activities and write a written report for you & your cooperating teacher(s). The report will be shared with your university supervisor for student teaching.

Besides the 40+ hours of observing and teaching in the public school, you will attend four two-hour seminars besides the initial meeting of Math 401. The first seminar lets you interact with several present NIU student teachers, the second seminar lets you talk with teachers experienced in motivating students, the third seminar focuses on appropriate uses of technology in the classroom facilitated by a mathematics educator who is an expert in that field, and the fourth seminar gives you a chance to discuss planning for the job search & to meet with your university supervisor for student teaching.

Throughout the semester you will be compiling material for your Math 401 Portfolio that will be turned in the last week of the semester. This portfolio will contain such documents as your time log, weekly reflective log, classroom management plan, multicultural activity, record of interviews with resource personnel, self-evaluation of your experience, your copy of the observation report from the Coordinator of Math 401, and the cooperating teacher's(s') evaluation(s) of specific lessons and your overall experience, and any lesson plans (inc. supplementary materials & assessments that you made) you created while teaching.

Course Requirements:

1. Minimum of 40 hours (preferably 50+ hours) of observing and teaching in the public school
2. Completion of assignments in the Math 401 Portfolio
3. Observation of a teaching activity by the Coordinator of Math 401
4. Attendance at and active participation in all the seminars
5. Evaluation of specific lessons and the overall experience by cooperating teacher(s)

Assessment Instruments (Final Grade is S/U):

1. Your self-evaluation of experience
2. Evaluation of teaching observation by Coordinator of Math 401
3. Evaluation of specific lessons and overall experience by cooperating teacher(s)
4. Evaluation of portfolio assignments in Math 401 Portfolio
5. Evaluation of professional dispositions by Cindy Stecher required by NCATE.

Selective Bibliography:

Johnson, David R. Every Minute Counts. Palo Alto, CA: Dale Seymour Publications (1982). Cost - \$14.00 (Payable to Cindy Stecher **by March 19**)

Observations (make any necessary adjustments for the individual student):

1-5 hours—Observe two courses, if possible, (either different academic levels or different age groups) that your cooperating teacher teaches and reflect upon the different teaching styles used by your teacher, learning styles of the students and methods teacher uses to get feedback from students. **Use the questions on “Framework for Analyzing Instruction” at the end of your folder as a guide for your observations and reflection log entries. Use the List of Experiences and the Checklist for Discussion with Cooperating Teacher as a guide throughout the Math 401 experience.** Also discuss with the teacher how he/she plans for a semester, a unit or chapter inc. prioritization of topics, and for a single lesson. Ask if they would show you unit/semester plans, a sample daily lesson plan or share with you the lesson plan format that they use. **Look at school’s Report Card at irc.niu.edu and record % of ethnic populations as part of your multicultural awareness activity. Obtain and read a faculty/student handbook**, study the school philosophy or Mission Statement, procedures (inc. attendance & grade recording), discipline policies, information about extra curricular activities and **obtain a copy of the mathematics curriculum (usually a flow chart of the various math course sequences a student might follow or a written description of the progression of courses) used at your school and the semester planning guide for one of your cooperating teacher’s courses. Put information from your school (inc. the handbook) in a 3-ring binder, divided into sections.** Become acquainted with the facilities & resources (both people & material) at your school. **Look at the school’s or district’s website, if available.** Discuss the “class expectations & classroom procedures” your cooperating teacher communicates to his/her students at the beginning of the year, and, if possible, **obtain copies of the expectations/procedures he/she uses for each of his classes.** If possible, during one of the classes circulate and help the students as they work on problems during class. **Ask your cooperating teacher for a copy of the seating charts and begin to learn, as quickly as possible, the names of the students in the classes you have arranged to observe during your 40+ hour clinical experience.**

6-10 hours—Complete the above activities. Discuss discipline situations with your cooperating teacher and find out how he/she applies the school rules and what happens when a student goes beyond the bounds of classroom discipline. Discuss strategies/resources/adaptations for working with “at risk” & special needs students (including IEP’s/504’s). Also, watch for motivational strategies & applications your cooperating teacher uses.

Discuss contacting parents & parent conferences. With permission of your cooperating teacher and student's parents, attend parent conferences and/or listen in on parent phone conferences. Become more actively involved by helping individual and small groups of students during class or outside of class, grading papers, taking attendance. Try to establish a professional rapport with “challenging” students. At the discretion of your cooperating teacher you may begin to take charge of the class by reviewing homework, etc., for a short period of time. Reflect on any teaching activity you do in your weekly log. By this time you should have become acquainted with the school building, especially the resource centers, faculty workrooms, guidance office, dean's office, main office, custodial offices, etc. **During non-class time, practice writing on board, overhead, etc. and evaluate legibility, size, etc., from different locations in the classroom.**

10-20 hours— At the discretion of the cooperating teacher, teach partial lessons either from cooperating teacher's or your lesson plans, reviewing homework, monitoring quizzes and homework sessions Discuss organizational techniques for paper work, grading homework, record keeping & grade recording. Also discuss NCLB & standardized testing. Perhaps design worksheets, review sheets, quizzes, etc., which may be used in the classroom once they have been approved by the cooperating teacher. If you administer a quiz, then, with the cooperating teacher's approval, you might review it the next day & practice re-teaching concepts. With your cooperating teacher's approval of your lesson plans you may teach a new lesson or a review lesson. By the end of this segment try to arrange for the first video taping (optional) of your teaching. I shall e-mail you the video release form if you need to use the form. Detailed lesson plans, worksheets, and assessment instruments must be given to your cooperating teacher well in advance of their use to give the cooperating teacher time to review them and to make changes. Make sure you get detailed feedback & suggestions on your lesson plans before implementation & also feedback about your implementation, especially motivational strategies, questions & questioning techniques (see Evaluation of Lesson Checklist). You need to have at least two completed Evaluation of Lesson Checklists in your Math 401 Portfolio.

20-30 hours— If possible, teach at least 4 entire classes, hopefully, of the same preparation (example – Algebra I) using your own lesson plans, which have been approved by cooperating teacher. For example, teach 4 lessons of an Algebra I class, preferably on 4 days (hopefully sequential) or teach 2 Algebra I classes on 2 hopefully sequential days for a total of 4 classes or, in block scheduling, teach 1 class on 2 or 3 days. If possible and with permission of your cooperating teacher, create at least one cooperative learning activity. **You may teach more than one preparation, but you need to teach a total of at least 4 classes, preferably in the same preparation.** Ask cooperating teacher to give you constructive criticism as you begin teaching and incorporate some of these suggestions into your subsequent lesson plans. **See Evaluation of Lesson Checklist. Cooperating teacher must complete at least 2 of these checklists for different lessons you taught, and you need to include these completed forms in your portfolio.** Concentrate on questioning techniques and wait time, teaching for different learning styles, motivational strategies, and using multiple representations for the concepts you present. Ask your cooperating teacher for feedback on these areas. If possible, include applications in your lessons. Try to include a quiz or other assessment that covers the concepts you have taught and then follow up on the results. Throughout this segment of the clinical experience make sure you discuss your progress with your cooperating teacher. Reflect daily on your progress with respect to how well the objective was met, how you knew the objective was met, comment on student participation, feedback and assessment. List strengths & also indicate areas in need of improvement. When you teach a new lesson, use the Category Checklist and evaluate yourself in the areas listed. Interview a special education teacher, a teacher experienced in motivating students & a dean. Arrange interview in advance and have prepared questions. If possible, attend an IEP meeting. Perhaps “shadow” a challenging student and/or a special education teacher. Write a brief thank you note or be sure to thank them at end of interview.

30-40 hours— Continue teaching and try to make a second video tape (optional) of your teaching. Observe the teaching styles of your cooperating teacher and other faculty and, after viewing the video tape, reflect on how you might modify your styles to help more students. May want to discuss organizational techniques with different teachers. Perhaps “shadow” one of your more challenging students. Observe classes of different levels and possibly math classes of the middle school or high school and reflect on what your students are “coming from” or “going to”. As you observe teachers, select a “novice” and an “expert” teacher and reflect in your log what differentiates the two. [Note: “Novice” does not necessarily mean a new teacher.] Perhaps observe at least one extra curricular activity that you might be interested in helping with during your student teaching or first years as a teacher. **Have cooperating teacher look at your classroom management plan & hwk grading policy.** Have cooperating teacher complete the final evaluation form and discuss it with you. Compare your philosophy of education now with the one before this clinical experience. **If possible, obtain copies of textbooks (preferably teacher's editions) of the textbooks for all the courses you will be teaching during student teaching.**

After the end of NIU's semester, if you could not go to your school for at least two or three consecutive days, please make every effort to do this to get a feel for the entire day & consecutive days at your school.

Contact of Cooperating Teacher by Coordinator of Math 401

At least once during Math 401, Coordinator will contact cooperating teacher to discuss progress, strengths, area to improve, etc.

Observation by a Representative of NIU

During the last two above segments you will be observed by a faculty member from NIU and he/she will make a written report of which you will receive a copy.

Portfolio Activities (# 2, 5, 6, 7 and 10 must be typed) [Put portfolio materials in a folder or 3-ring binder.]

1. Time Logs (inc. description of how you will be in touch with C. T. between 401 & 413)
2. Weekly Activity/Reflection Logs
3. Copy of Math Curriculum Used at School (Usually a flow chart showing possible student 410/412) progression through the math curriculum)
4. Semester planning guide for one of the courses you have taught (Obtain from c. t. or dept. chair)
5. Multicultural Awareness Sheet
6. Report of interviews (inc. questions) with special education teacher, dean & teacher experienced in motivation.
7. Classroom Management Strategies (Classroom Management Plan from MATH)
8. Your copy of Mrs. Stecher's observation report
9. Two Evaluation of Lesson Checklist Forms by CT
10. Self-Evaluation of Your Teaching
11. Final Evaluation by Coop. Teacher
12. Your own Lesson Plans, Worksheets & Quizzes

Note: When you turn in your portfolio at the end of the semester, please **make 2 additional copies (besides original) of the Multicultural Awareness Sheet, & Interview with Special Education Teacher. Please make 3 additional copies (besides original) of the Time Log(s) & the Evaluation of Lesson Checklists and Final Evaluation by your Cooperating Teacher(s).** One set of copies goes to the College Office of Teacher Certification and the other is for your file. The additional copy of the time log and your cooperating teacher's evaluation is for your university supervisor for student teaching.

Mandatory seminars:

During the semester there will be 4 seminars on topics relative to methods of teaching mathematics, etc. Seminars will also provide an opportunity for students to discuss their classroom experiences. **Dress professionally for each seminar.**

Seminar Dates for Spring 2009:

Monday, Feb. 2, 2009, 4:00 - 5:50 p.m. (Reavis 210)

Panel of Present Student Teachers and Cooperating Teacher(s)

Monday, Feb. 16, 2009, 4:00 – 5:50 p.m. (Reavis 210)

- (1) Small group discussions of Math 401 experiences
- (2) Panel of Teachers in Motivation

Monday, March 30, 2009 4:00 – 5:50 p.m. (Reavis 210 or DuSable 306)

Technology in the Classroom

Monday, April 27, 2009, 4:00 – 5:50 p.m. (Reavis 210)

- (1) Job Searching Guidance from Career Services
- (2) Session with University Supervisors

Wednesday, April 29, 2009 [No Meeting!] - Completed Portfolios must be in my mailbox in Math Office by 4:00 p.m. (Don't forget the extra copies as explained above.)