

Course Syllabus

This syllabus is subject to change at the discretion of the instructor.

MTHC 5340.W1
COURSE NUMBER

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INSTRUCTOR

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Topics in Mathematics Education: Technology in the Math Classroom
COURSE TITLE

Spring 2005 3
TERM CREDIT HOURS

Online
SITE

1. Course Description:

This course is offered online. It is a hands-on, project-based course designed to help educators use technology creatively and effectively in support of curriculum in middle and secondary mathematics classrooms. Emphasis is on learning how to use calculators, software and the internet. Students' work will reflect the grade level they teach.

2. Learning Outcomes:

- Describe terms, concepts and trends in the use of technology with middle school, secondary, and special education students. (MO-STEP 1b, 3a, 5a: CC5-K3)
- Select and evaluate web sites to determine appropriate use in the classroom. (MO-STEP 1b, 5a; CC5-K3)
- Plan for the use of technology as an integrated part of the curriculum (MO-STEP 1b, 5a; CC5-K3)
- Use spreadsheets, word processing (with equation editor) with students and as teacher utilities. (MO-STEP 1b, 5a)
- Use the Internet for research and email (MO-STEP 1b, 5a)
- Design an integrated lesson using technology (MO-STEP 1b, 5a; CC5-K3)
- Demonstrate competency with a variety of mathematical software and hardware. (MO-STEP 1b, 5a)

3. Activities:

This course is taught online and a large part of it is individual work. It involves reading, experimenting, and writing. There are multiple small units worth a varying number of points. There will be units on the web, using calculators and accessories, math specific software, math classroom software, spread sheets, professional videos, etc. Depending on the unit, you will be asked to write a short report, plan a classroom activity, do an assignment to demonstrate proficiency and/or participate in a discussion group. For each unit you will also be required to write a brief learning log indicating a day by day record of how much time was spent and what was accomplished. The log should be informal as if you were telling a friend how you spent your time. It can include positive and negative comments as to the usefulness of the content and organization of the assignment.

With few exceptions, the units may be worked in any order. Some units require special materials such as videotapes or calculators. Information as to where to access these materials will be given online. You have flexibility in which activities you do, with the exception of minimum requirements in the discussion units. Most units can be completed within a few days; however, the discussion units will be spread out over the course. Be sure to start on these within the first week.

4. No texts are needed for this course. Most reading material will be available through WebCT or the internet. Some required hardware and videos will be made available on the St. Louis campus.

5. Evaluation:

Points for each activity will vary from 5 to 20 points. If you do part of a unit you will earn a portion of the points. This course is offered on a pass/fail basis. To pass you must have earned at least 170 points, including some points from each required discussion unit. It is important in an online course to pace yourself and not turn in all your work in the last week or two. Therefore, I will not accept more than 30 points worth of work in each of the last three weeks. I encourage you to keep a steady pace of turning in about 10-15 points of work each week. I will attempt to get the work graded quickly.

6. This is a 16 week 3 credit hour online course. After you are registered go to <http://www.webster.edu/worldclassroom/> to learn about the Webster University WorldClassRoom. This site has step-by-step instructions about how to set up your computers for a WebCT course (http://www.webster.edu/worldclassroom/tech_requirements.html.)

If you have never taken a WebCT course before, you are strongly recommended to go through the entire "Student Information Center - WebCT Orientation" on your MyWebCT page to learn about the various WebCT tools.

7. All projects and papers are to be submitted through WebCT.