

SYLLABUS

MED 334 -- SPRING 2019

TECHNOLOGY TOOLS FOR MATHEMATICS TEACHERS

Because technology empowers students to solve difficult problems, we have a historically unique opportunity to change the misconception that only bright students are able to do interesting mathematics (Demana & Waits)

INSTRUCTOR

Dr. Richard Mitchell Office: D356B, Science Building e-mail: rmitchel@uwsp.edu
Campus: 346-2575 Math Dept: 766-2120 Fax: 346-4260 Cell: 340-4753

TIMES

Class: M, T, W, R at 12:00 to 12:50 in Sci A212;
Office Hours: Feel free to stop by anytime that I am not in class. Other times by appointment - just ask.

INTRODUCTION

Course activities will focus on some of the many mathematical representations typically available through technology, including numerical, tabular, graphical, statistical, algebraic, and geometrical representations. We will explore these representations using hand-held devices such as the TI-73, TI-83, and TI-89 calculators as well as using computer software such as electronic spreadsheets, dynamic geometric exploration software, calculator-based laboratory materials, and computer algebra systems.

GOALS AND OBJECTIVES

A fundamental goal of the course is to become more familiar with the technology tools available and appropriate for teaching and learning of mathematics in grades 6-12. Much of our class time will be invested in mathematical explorations using calculators or computers and in discussions of those explorations.

A secondary goal, which for the most part is unmeasured, is for you to become comfortable "without knowing yet". The only way to stay current with technology is to become comfortable with learning on your own and from colleagues. If you never get to this point, it will be difficult for you to stay current. To help accomplish this, we will not step through each new area of technology as a group. Instead I will provide you with materials and require you to learn the materials for the most part on your own.

COURSE REQUIREMENTS

Your grade for the course will be based on the following distribution of points:

1. Technological Skills: 75% of the grade. During this course you will become proficient with various technology tools that are relevant to middle/secondary school mathematics. **NOTE: You will need to resubmit all skill grade reports at the end of the semester.** See the *Technology Skills – Overview* handout.
2. Student Teaching Ideas: 10% of the grade. Discuss what you feel are your top three most important/practical uses of technology in the classroom that you would like to incorporate while student teaching. Be sure to explain why you chose these ideas and how you would like to incorporate them into your teaching/classroom. Limited to no more than three pages (double spaced lines, standard 1" margins,). Due: End of Week 14, or before.
3. Attendance: 10% of the grade. Students are expected to attend all class periods. Much of the learning in this class will occur either during class, or as a result of attending class. You are allowed four absences during the semester; plan your schedule accordingly (e.g., days before break, etc.). **Athletics and school events are not excused absences – be sure to see me in advance.** Of course there are exceptions for military service obligations. Absences that are beyond your control will be handled on an individual basis. The attendance portion of your grade will be computed according to the following schedule:

Absences:	0-4	5	6	7 or more
Percentage Points:	10%	8%	5%	0%

It is YOUR responsibility to ensure that your name is on the attendance sheet each day that you are in class. **Note: At the discretion of the instructor, up to ten additional percentage points may be deducted for excessive absences (more than 7).**

4. Subjectivity category: 5% of the grade. Given at the discretion of the instructor and based on the completion of above-and-beyond work and/or personal growth, but along with such things as attendance, class participation, level of preparation for class periods, work completed in a timely manner, overall performance in the course, etc. **To get a value of 5% means that you performed extraordinary in this course.** To receive an A, A-, or B+ in this course you must submit a written proposal justifying such a grade.

GRADING POLICY

Final letter grades will be assigned as follows:

A, A-, or B+ refer to subjectivity category above

B [90% - 80%]; C (79% - 70%]; D (69% - 60%] F (60% - 0%]

Appropriate + and - scores will be added at the discretion of the instructor. An incomplete will not be given for this course, unless you provide evidence of a situation beyond your control that prevents you from doing your work for a substantial time. A heavy course load is not sufficient reason for an incomplete. Note: Since records for this course are stored on a computer, please keep all materials until final grades have been posted.

Necessary conditions for an A- or A	Necessary conditions for a B+
<ul style="list-style-type: none"> • Submit a written proposal justifying such a grade • A: Subjectivity must be 5; A-: Subjectivity must be ≥ 4 • No late submissions • No more than 4 absences • A: At least two skill units with more than required components; A-: At least one skill unit with more than required components 	<ul style="list-style-type: none"> • Submit a written proposal justifying such a grade • Subjectivity must be ≥ 3 • No late submissions

WORK LOAD

University guidelines suggest that to do well in a course, students may need to spend 2-3 hours outside of class for each hour in class. Since this class meets four hours a week, you should expect to spend 8-12 hours a week in preparation for this course.

STUDENT RIGHTS AND RESPONSIBILITIES

You should be fully aware of your rights and responsibilities as a UWSP student. These are detailed in the *UWSP Community Bill of Rights and Responsibilities*:

<http://www.uwsp.edu/dos/Documents/Community%20Rights%20and%20Responsibilities%20book.pdf>

ACADEMIC MISCONDUCT POLICY

You are encouraged to work with others in the class (also with friends or tutors), but all of the work that you submit must be substantially your own. It is perfectly fine to get help, but you must personally understand whatever you submit for credit.

Academic misconduct is an act in which a student:

- Seeks to claim credit for the work or efforts of another without authorization or citation;
- Uses unauthorized materials or fabricated data in any academic exercise;
- Forges or falsifies academic documents or records; or
- Assists other students in any of these acts.

For a full discussion of the academic misconduct rules on the UWSP campus see Chapter 14 of the Rules of the Board of Regents, Wisconsin Administrative Code:

<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CB0QFjAA&url=http%3A%2F%2Fwww.uwsp.edu%2Fdos%2FDocuments%2FUWS%252014.docx&ei=v2zzU4XdH9jgoAS0pYKQBw&usq=AFQjCNE3yU8CJfs0O4CXRnkUIT-aZkSPrA>