

MATH 228- FALL 2022 (3 credits)

FUNDAMENTAL MATHEMATICAL CONCEPTS FOR ELEMENTARY TEACHERS

Sec. M01 (Marshfield), Sec. W01(Wausau), M01F and W01F (virtual) TR 8:00-9:15 a.m.

INSTRUCTOR: Dee Ann Dewitt

OFFICE: Marshfield Room 207A

PHONE: Office 715-389-6549

E-MAIL: ddewitt@uwsp.edu

OFFICE HOURS: TR 9:45-10:30 and by appointment for virtual office hours

MATERIALS:

Text: *Mathematics for Elementary Teachers with Activities 5th edition* by Sybilla Beckman

Materials: required: 3-ring binder with loose-leaf paper or on-line folder, calculator (suggested TI-30X)

optional and useful: scissors, colored pencils, hole punch, dividers for folder

OBJECTIVES:

This class will ask you to think mathematically and master concepts which will allow you to become effective teachers.

Topics covered will include the following: teaching and evaluation standards, mathematical reasoning, problem-solving, numeration systems, number theory, and algorithms for operations on numbers.

You will need to go beyond basic concepts; you must be willing to understand the underlying concepts of mathematics so that you are able to communicate mathematics well, both in oral and written form.

GRADING:	Midterm Exam	100	
	Final Exam	100	
	Homework Quizzes	100	4 quizzes- 25 points each
	Homework Projects	50	varied assignments
	Participation/Attendance	50	
	Total	400	

CLASS GRADE: Your final class grade will be determined based on the following percentages.

93 – 100 %	A	83 – 86 %	B	73 – 76 %	C	63 – 66 %	D
90 – 92 %	A–	80 – 82 %	B–	70 – 72 %	C–	60 – 62 %	D–
87 – 89 %	B+	77 – 79 %	C+	67 – 69 %	D+	below 60%	F

Fall Semester

2022

Labor Day - Sept. 5

Classes Begin - Sept. 6

Last day to add or drop a 16-week course without a grade - Sept. 15

Last day to drop a 16 wk course - Nov. 11

Registration for Winterim courses begins - October 31st

Graduate student registration for Spring classes begins - November 21st

Undergraduate student registration for Spring classes begins - November 21st

Thanksgiving recess begins 6 p.m. - Nov. 23

Classes resume - Nov. 28

Course registration begins for non-degree seeking students (specials) for Spring - December 12th

Last day of classes - Dec. 15

Reading Day - Dec. 17

Commencement - Dec. 17

Final Exams Dec. 16 - 22

EXAMS:

There will be two exams- midterm exam and a final exam.

- **Midterm Exam:** during week 8 or 9
- **Final Exam:** Tuesday, Dec. 20 8:00-10:00 am

Missing an exam will result in a 0 unless arrangements have been made **in advance** or a **verifiable emergency** develops just prior to class time (in which case you should contact me as soon as possible). In general, approved make-up tests **MUST** be taken **PRIOR** to the next class meeting.

HOMEWORK:

- **Homework quizzes:** You will be expected to do specific problems from the text or from a handout. These problems will be organized in your binder/on-line folder. Random problems from your class notes, discussions, and homework will be selected and graded using on-line homework quizzes at various times during the semester. You will be able to use your notes/problems in your binder/on-line folder. There will be four homework quizzes worth 25 pts. each.
- **Homework projects:** These will also be given throughout the semester. For example, you could be asked to read an article on a pertinent topic, search for further resources/examples of a concept, or present an example/idea to the class. The point totals on these will be varied and will be announced at the time of the assignment.
- You won't understand every topic immediately; in some cases, you will need to ask questions, seek help from others, and spend more time on the topic. Don't wait to ask for assistance.

ATTENDANCE/PARTICIPATION:

Since a significant amount of material is covered during each class period, it is to your advantage to attend each class. It also is important that you participate in solving problems and contributing to the class discussion. Group work will also be assessed as part of your attendance/participation points grade. This overall participation/attendance grade will be determined using a rubric. This determines 12.5% of your final grade in this class.

CELL PHONES:

Cell phones should not be used in the classroom without the prior consent of the instructor. This class requires a level of focus and an amount of participation that cannot be obtained while you are using your cell phone. In addition, the use of a cell phone during a class is considered unprofessional. **Any type of unprofessional behavior will negatively affect your attendance/participation grade.**

COURSE INTRODUCTION ON CANVAS:

In your **Math 228 Canvas site**, you will find a "**Start Here section:**" It includes the syllabus and tentative schedule, a meet- your- instruction link, the zoom links for class and for office hours, and other useful support links.

There is also a "**UWSP Student Support Resources section.**" This includes the following topics: academic support, technology support, general UWSP support, UWSP emergency procedures, and Canvas support.

Please take the time to read through this material.

COVID-19 CAMPUS PROTOCOL:

Many COVID-19 restrictions have been lifted, both across the state and on UW-Stevens Point campuses. Yet COVID cases continue, so it's important to continue taking precautions. Here are the face-covering procedures that UW-Stevens Point has in place for fall. **For more information on COVID**, visit the COVID [website](#).

Face coverings are not required but are encouraged.

- Consider wearing a mask in crowded indoor spaces and when in close proximity outdoors.
- Please be respectful of individual choices to wear or not wear a face covering, and to those who have a higher risk of complications.
- Masks are required in Student Health Service and the Speech, Language and Hearing Clinic.
- Here's more on well-fitted [face coverings](#).

INCLUSIVITY:

It is my intent that all students from diverse backgrounds and perspectives be well-served by this course, students' learning needs be addressed both in and out of class, and the diversity in this class be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of diversity. I encourage you to make suggestions to this end. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

If you have experienced a bias incident (an act of conduct, speech, or expression to which a bias motive is evident as a contributing factor regardless of whether the act is criminal) at UWSP, you have the right to report it using this [link](#). You may also contact the Dean of Students office directly at dos@uwsp.edu.

ACCOMMODATIONS:

Inform Your Instructor of Any Accommodations Needed

UWSP is committed to providing reasonable and appropriate **accommodations** to students with disabilities and temporary impairments. If you have a disability or acquire an impairment or injury during the semester and you need assistance, please contact the * Disability Resource Center as soon as possible at 715-346-3365, or at DATC@uwsp.edu. You may also want to visit their website, [Disability Resource Center \(DRC\) - University of Wisconsin-Stevens Point \(uwsp.edu\)](http://www.uwsp.edu/drc).

ACADEMIC MISCONDUCT:

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class, and integrity in your behavior in and out of the classroom.

UWSP Academic Honesty Policy & Procedures

Student Academic Disciplinary Procedures

UWSP 14.01 Statement of principles

The board of regents, administrators, faculty, academic staff and students of the university of Wisconsin system believe that academic honesty and integrity are fundamental to the mission of higher education and of the university of Wisconsin system. The university has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

UWSP 14.03 Academic misconduct subject to disciplinary action.

(1) Academic misconduct is an act in which a student:

- (a) Seeks to claim credit for the work or efforts of another without authorization or citation;
- (b) Uses unauthorized materials or fabricated data in any academic exercise;
- (c) Forges or falsifies academic documents or records;
- (d) Intentionally impedes or damages the academic work of others;
- (e) Engages in conduct aimed at making false representation of a student's academic performance; or
- (f) Assists other students in any of these acts.

(2) Examples of academic misconduct include, but are not limited to: cheating on an examination; collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work when a part or all of the paper or assignment is the work of another; submitting a paper or assignment that contains ideas or research of others without appropriately identifying the sources of those ideas; stealing examinations or course materials; submitting, if contrary to the rules of a course, work previously presented in another course; tampering with the laboratory experiment or computer program of another student; knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed.

All suspected incidents of academic misconduct shall be handled using the UW System rules, Chapter 14. "Academic misconduct" includes, but is not limited to, the following examples: "cheating on an examination, collaborating with others in work to be presented, contrary to the stated rules of the course; submitting a paper or assignment as one's own work, when a part or all of the paper or assignment is the work of another; tampering with the laboratory experiment or computer program of another student. (UWS 14.03)" Further definition of "academic misconduct" can be found in UWS 14.03. UWS 14 is available to all students in the library; additionally, all students received a copy of this policy during their orientation.

HONORLOCK:

I will be using Honorlock to proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You DO NOT need to create an account, download software or schedule an appointment in advance. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, a functional microphone, a stable Internet connection, and the Chrome browser.

Before you get started, please review the Honorlock Student Information module in Canvas to familiarize yourself with Honorlock. All exam proctoring services, including Honorlock, can seem invasive because of the way they function. Honorlock will record your webcam, audio, and computer screen during your exam to help ensure integrity of the course for all users. Honorlock has been vetted and approved by both UW-Stevens Point and UW System, to ensure that it meets security and privacy requirements.

Make sure you open Canvas using the Google Chrome browser.

You are strongly encouraged to **take the Honorlock Practice Quiz before attempting any graded exams**. The Honorlock Practice Quiz will allow you to test Honorlock to ensure you are comfortable using the system and to ensure that your computer will function properly.

When you are ready to test, log into Canvas, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan your room. Honorlock will be recording your exam session by webcam as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device. Good luck!

Honorlock support is available 24/7/365. If you encounter any issues, you should contact [Honorlock Live Support. \(Links to an external site.\)](#)

If you encounter issues with Canvas, please contact Canvas Support directly by clicking the Help Button (question mark inside a circle) located at the bottom of the left navigation bar in Canvas.

If you have concerns please contact me directly.

MESSAGE FROM YOUR INSTRUCTOR:

I desire to help each one of you become a better, more confident learner and educator of mathematics. This class is intended to be an essential part of your ability to communicate mathematical ideas to your students. As stated in the *Principles and Standards for School Mathematics* (2000):

“Communication is an essential part of mathematics and mathematics education. It is a way of sharing ideas and clarifying understanding... When students are challenged to think and reason about mathematics and to communicate the results of their thinking to others orally or in writing, they learn to be clear and convincing.” (p.60)

We will struggle through some concepts; we will make mistakes and try again. We will support each other as we learn that difficulties are a part of mathematical learning. As Albert Einstein once stated:

“Do not worry about your difficulties in mathematics. I can assure you mine are still greater.”

Let's not worry, then, about “getting stuck” or “being wrong.” This is how your future students will feel at times. We need to model to our students that they need to ask questions, rework problems, and analyze errors. It is a process that will lead to greater understanding for each of us.

Wk	DATES	Tentative Schedule: MATH 228 FALL 2022 TR
Week 1	SEPT 6, 8	Introduction to the Course, Peer Interviews, Mindset Mathematics
Week 2	SEPT 13, 15	Patterns, Problem-Solving Strategies and Skills
Week 3	SEPT 20, 22	Numeration Systems- History, Real Number System, Sets of Numbers
Week 4	SEPT 27, 29	Numeration Systems- Decimals, Negative Numbers, Comparing Numbers, Rounding
Week 5	OCT 4, 6	Number Theory- Factors and Multiples, Even/Odd, Prime Numbers
Week 6	OCT 11, 13	Number Theory- Prime Factorization, Greatest Common Factor (GCF) and Least Common Multiple (LCM)
Week 7	OCT 18, 20	Whole Number Addition and Subtraction- Interpretation, Commutative and Associative Properties
Week 8	OCT 25, 27	Whole Number Addition and Subtraction- Adding/Subtracting Negative Numbers Whole Number Multiplication- Interpretation, Multiplying by Ten
Week 9	NOV 1, 3	Whole Number Multiplication- Commutative and Associative Properties, Areas/Volumes, Distributive Property Standard Algorithm, Remainders
Week 10	NOV 8, 10	Whole Number Division- Interpretations, Dividing by Zero (Why it can't be done!), Division Algorithm and Remainders
Week 11	NOV 15, 17	Fractions- Defining, Equivalent Fractions, Comparing Fractions, Percent
Week 12	NOV 22 NOV 24	Fractions- Addition and Subtraction NO CLASS- THANKSGIVING BREAK
Week 13	NOV 29, DEC 1	Fractions- Addition and Subtraction
Week 14	DEC 6, 8	Fractions- Multiplication and Division
Week 15	DEC 13, 15	Fractions- Multiplication and Division
FINAL		FINAL EXAM - Tuesday, Dec 20 8:00-10:00 am
As your instructor, I reserve the right to make changes to the course schedule based on the learning pace of the class or other unanticipated circumstances. I will communicate any changes to you as soon as they are made.		