Western New Mexico University (WNMU)

Department of Math and Computer Science



Name of Course:	Math for School Teachers
Course Number/Section:	MATH 1010-72
CRN:	13892
Semester:	Fall Semester, 2023
Meeting Times:	Fridays: 10:30 am - 11:30 am MDT
Venue:	Zoom: https://wnmu.zoom.us/j/82058513711
Course website:	https://mathematicseducation.appspot.com/
Instructor's Name:	**Samuel Chukwuemeka B.Eng., A.A.T, M.Ed, M.S**
WNMU E-Mail:	samuel.chukwuemeka@wnmu.edu
Office Location:	Online
Office Hours:	Fridays: 10:30 am - 11:30 am MDT
Google Voice Phone Number:	(256) 365-7048 (Call or text anytime)

Personal Quote: "The Joy of a Teacher is the Success of his Students." - Samuel Chukwuemeka

I. COURSE DESCRIPTION:

This course is for students intending to major in early childhood education, elementary education, special education, or secondary education in fields outside of business, mathematics and the sciences. Students will learn the mathematics necessary to pass math-based entrance exams for admittance into the School of Education. Prerequisite: MATH 098. Credit Hours: 3

General Course Purpose

The primary purpose of MATH 1010 is to prepare students for the Praxis Core Academic Skills for Educators Math Test.

Course Prerequisites/Corequisites

Prerequisites: MATH 098: Introductory Algebra

II. COURSE INSTRUCTIONAL OBJECTIVES:

Upon the successful completion of this course, the student should be able to do these measurable objectives for each topic.

❖ **Numbers**

- Demonstrate the knowledge of place values of numbers and the relative magnitude of numbers.
- Perform arithmetic operations of addition, subtraction, multiplication, and division of whole numbers in multidigit computations.
- Identify equivalent ways of representing integers, fractions, decimals, and percents, including the use of exponents and scientific notation.
- Solve word problems involving integers, fractions, decimals, percents, ratios, and proportions.

❖ **Fundamental Principles of Algebra**

- Evaluate algebraic expressions by substituting numbers for variables.
- Solve linear algebraic equations and inequalities in one variable.
- Identify equivalent algebraic expressions.
- Graph ordered pairs and number relationships presented in tabular or symbolic form.
- Identify the linear equation that best represents data presented in tabular or graphic form.

❖ **Measurements and Units**

- Identify a measurement or measurement unit needed to solve a problem.
- Convert units within and between standard and metric measurement systems.
- Solve real-world problems involving basic measurement.

❖ **Basic Geometry**

- Discuss the meaning of lines, line segments, and angles.
- Solve problems involving lines, line segments, and angles.
- Analyze the fundamental properties of triangles, quadrilaterals, and circle.
- Solve problems involving the length, perimeter, and area of basic shapes and the surface area and volume of rectangular solids.
- Solve real-world problems involving geometric concepts, including the Pythagorean theorem.

❖ **Probability and Statistics**

- Calculate the probability of a given outcome.

- Analyze information presented in tables, line graphs, scatter plots, pictographs, bar graphs, histograms, and pie charts.
- Recognize the appropriate graphic representation of data.
- Compute and interpret the mean, median, and mode of data.
- Demonstrate knowledge of the concepts of range, standard deviation, and spread.
- Recognize appropriate and inappropriate uses of basic statistics.

❖ **Problem Solving, Reasoning, and Mathematical Communication**

- Estimate the solution to a given problem.
- Evaluate the reasonableness of a solution to a given computation or problem.
- Perform a given calculation or solve a given problem using algorithms (i.e., a set of instructions).
- Identify missing terms in numerical and graphical patterns using inductive reasoning.
- Draw conclusions and evaluate arguments using deductive reasoning.
- Translate between written English and mathematical terminology, concepts, and notation.

III. INSTRUCTIONAL MATERIALS AND TECHNOLOGY:

A. REQUIRED

(1.) MyLab Math (MLM) Access for the online assignments (has the eBook). The eBook has notes, videos, audiovisual resources and several learning aids. This is required. Please log into the Canvas course and complete the registration for MLM. Then, click the **MyLab and Mastering** link on the Left Hand Side (LHS) and follow the links/directions to access the assignments.

(2.) Course website is required.

(3.) Pens and Pencils and Standard/Simple/Basic Calculator. The use of any other calculator requires my approval. These are required.

(4.) Access to a Personal Computer or Mackintosh (not tablet, not smartphone) with internet and email capabilities, and updated internet browsers are required. You may use the computers in the School Computer Labs., School Library, or the Public Library.

B. RECOMMENDED

(1.) Graph Book, Ruler, other writing materials as applicable.

(2.) The audiovisual resources and learning aids in the MLM Access.

(3.) Other resources that may be provided by the instructor.

C. NOT REQUIRED:

The hard copy of the textbook: Skills Review for Mathematics for Elementary and Middle School Teachers with Activities: 6th Edition; ©2021: Beckmann, Sybilla: Pearson: ISBN-13: 9780136922001 (The hard copy of the textbook is not required).

IV. EVALUATION AND REQUIREMENTS:

A. **Grade Determination**: Student evaluation will be based on performance on the following assessments:

MyLab Math (MLM) Assignments	= 60%
15 Discussion Board (DB) assessments @ 2% each	= 30%
Project	= 10%
TOTAL	= 100%

Method of Grading: The Weighted Average method is used to compute your grades. Grades will be posted in the Canvas course management system gradebook.

Grades: Letter grades are assigned using this scale:

[90, 100]	[80, 90)	[70, 80)	[60, 70)	[0, 60)
A	B	C	D	F

Here is an example to calculate the final grade:

Assessments	Weight (%)	Your Score (%)	Weighted Score
MLM Assignments	60	90	5400
DB 1	2	95	190
DB 2	2	90	180
DB 3	2	80	160
DB 4	2	85	170
DB 5	2	100	200

DB 6	2	70	140
DB 7	2	75	150
DB 8	2	84	168
DB 9	2	82	164
DB 10	2	93	186
DB 11	2	97	194
DB 12	2	81	162
DB 13	2	88	176
DB 14	2	96	192
DB 15	2	98	196
Project	10	100	1000
$\Sigma Weight = 100$		$\Sigma Weighted\ Score = 9028$	
Final Grade $= \frac{Sum\ of\ Weighted\ Scores}{Sum\ of\ Weights} = \frac{9028}{100} = 90.28\% \simeq 90\% = A$			

Please NOTE:

(1.) The final grade is rounded to the nearest integer only one time.

A grade of 79.5000111% is rounded to an 80% which is a B while a grade of 79.499999 is rounded to a 79% which is a C.

(2.) At least a final grade of 70% (C) is required to pass the course.

(3.) There is no extra credit or bonus point or curving grades for the course.

Please review the Frequently Asked Questions for explanations.

B. **LATE WORK/MAKE UP POLICY:**

Please review the Tentative Class Schedule and the Pacing Guide for specific dates.

MLM Assignments: All MyLab Math (MLM) assignments are released to you on the first day of class. There are two due dates for each section of the assignment. After the first due date, you may continue to work on the assignment without penalty until the final due date. Grades are updated biweekly in the Canvas gradebook. The final due date is Thursday, 7th December, 2023 (12/07/2023) by 11:59 pm MDT. There is no make-up for any assignment after the final due date.

Discussions: There is a Discussion Board (DB) forum activity each week besides the week of Thanksgiving holiday. The initial post is due on Thursday. At least one (one or more) response to an initial post of a different colleague is due on Saturday. There is no make-up for any missed DB activity. Please review the DB Requirements and DB Samples in the Canvas course and the course website. If you miss a DB assessment for any week, you may continue the discussion after the DB is graded. However, no credit is earned.

Project: You are strongly encouraged to submit a draft for the project. Review and do the corrections based on my feedback before the main submission. The project draft is initially due on Saturday, 14th October, 2023 (10/14/2023) by 11.59 pm MDT and finally due on Saturday, 25th November, 2023 (11/25/2023) by 11:59 pm MDT.
The project is initially due on Saturday, 21st October , 2023 (10/21/2023) by 11:59 pm MDT. Projects will be accepted up until the last day of class: Thursday, 7th December, 2023 (12/07/2023) by 11:59 pm MDT. After that date, no project will be accepted.

V. CLASS ATTENDANCE AND PARTICIPATION POLICY:

The weekly Office Hours/Live Sessions are recommended, but not required. Please note that the sessions are recorded. If the day and time does not suit your schedule, please send an email to me with your available days and times. I shall check my schedule and respond. You are encouraged to solve at least 20 questions of your MLM assignments daily. This will enable you to complete all work ahead of the due date. Participation in discussions is also very important. Further, you are encouraged to submit drafts for your project and make any corrections based on my feedback.

VI. COURSE ETIQUETTE:

It is my responsibility to promote a safe and conducive learning environment. It is my assumption that you know what is right and what is wrong. In that regard, I ask that you behave accordingly and be respectful at all times.
Students are expected to uphold the core values of academic integrity which include honesty, trust, fairness, respect and responsibility. These core values, combined with finding one's purpose and passion and applying them in and out of classroom learning, produce students who become extraordinary citizens.

VII. ACADEMIC INTEGRITY POLICY:

As a WNMU student, it is your responsibility to be informed about what constitutes academic misconduct, how to avoid it and what happens if you decide to engage in it.

Examples of academic misconduct include (but are not limited to):

- plagiarism (turning in work of another person and not giving them credit)
- stealing an exam or course materials
- copying another student's homework, paper, exam
- cheating on an exam (copying from another student, etc.)
- falsifying academic documents

Please note that violations of academic misconduct may result in a failing grade in the assessment, a failing grade in the course, and/or a report to the college administration among others. Please review pages 59 - 61 of the Student Handbook:
https://admin.wnmu.edu/handbooks/student-handbook/

VIII. INCLEMENT WEATHER POLICY:

The course is online. Hence, there are no physical meeting times besides the Office Hours/Live Sessions in Zoom (attendance is recommended but not required). Be it as it may, if you are affected by inclement weather that may affect your completion of the course, please stay safe, then inform me as soon as you can.

IX. INSTRUCTOR WITHDRAWAL FOR NON-ATTENDANCE:

Based on Page 119 of the Student Handbook:
https://admin.wnmu.edu/handbooks/student-handbook/

An instructor may withdraw a student from the class rolls, with a grade of "W" for nonattendance, from 6.25 % of the class through 68.75 % of the class. Example: for a 16 week class, after the first week of the semester through the 11th week. Non-attendance in class does not necessarily result in an instructor initiated withdrawal.

The Office of Financial Aid is required by the Department of Education to recalculate federal financial aid eligibility for students who withdraw prior to completing 60% of the semester.

Students are responsible for tuition and fees associated with the course(s).

Personally: I do not withdraw students from my courses. It is up to you if you wish to withdraw. You shall receive the grade you earned. Please review the Student Handbook accordingly.

X. POLICIES FOR INCOMPLETES AND WITHDRAWALS:

Please review the Student Handbook accordingly.

Also, please review the Frequently Asked Questions.

Typically, I do not assign Incompletes.

However, there are three conditions where I may consider assigning an Incomplete:

(a.) The student requests an Incomplete due to extenuating circumstances.

(b.) The student requesting the Incomplete should have made significant progress before the extenuating circumstance.

(c.) The extenuating circumstance occurred during the last week of class.

XI. COURSE SCHEDULE AND SEQUENCE OF INSTRUCTION:

Method of Teaching: Flipped Classroom lecture.

Please review: https://mathematicseducation.appspot.com/#aboutMATH1010

Math Tutoring: There are at least 3 tutoring opportunities available to you:

(1.) **Instructor** during Office Hours/Live Sessions: Online

(2.) **TutorMe** link in the Canvas course: the link is on the Left Hand Side (LHS) on the course homepage: 24/7 Online

(3.) **Math Tutors**: https://mathcs.wnmu.edu/resources/tutors/ : Online and Onsite

Writing: WNMU Writing Center: https://humanities.wnmu.edu/writingcenter/

XII. ACCESSIBILITY SERVICES:

Wellness and Accessibility Services: Services for students with disabilities are provided through Wellness and Accessibility Services: https://css.wnmu.edu/accessibility/students Services include, but are not limited to; alternate text, assistive technology information, campus housing arrangements, campus accessibility, testing accommodations, advocacy, or assistance with any other campus disability-related needs. (Available to all WNMU students). In order to qualify for these services, documentation must be provided by certified health care professionals. Coordinator of Wellness and Accessibility Services can be contacted by phone (575) 538-6277 or by email at accessibility@wnmu.edu

Pregnancy: Western New Mexico University does not discriminate against any student on the

basis of pregnancy or related conditions. Absences due to medical conditions relating to pregnancy will be excused for as long as deemed medically necessary by a student's doctor and students will be given the opportunity to make up missed work. Students needing accommodations can seek assistance with accommodations from the Wellness and Student Accessibility Services Coordinator at (575) 538-6277 or for more information visit the Title IX website at https://titleix.wnmu.edu/pregnancy-childbirth/

XIII. **TITLE IX: CONFIDENTIALITY AND MANDATORY REPORTER STATEMENT:**

Western New Mexico University faculty are committed to creating a safe learning environment for all members of our community, free from gender and sex-based discrimination, including sexual harassment, domestic and dating violence, sexual assault, and stalking, in accordance with Title IX of the Education Amendments of 1972.

Please note that the Title IX: Sex Discrimination and Sexual Harassment Policy designates all faculty members, including teaching assistants, as "Mandatory Reporters." Under WNMU's Title IX: Sex Discrimination and Sexual Harassment Policy all "Mandatory Reporters" must report all disclosures of sex or gender-based discrimination or violence to WNMU's Title IX Coordinator. The Title IX Coordinator will reach out to provide resources, support, and information after receiving a report, but community members are not required to respond to such outreach. Reported information will remain private.

If you have (or someone you know has) experienced any form of sex or gender-based discrimination or violence and wish to speak with someone confidentially, please contact WNMU's Mental Health Therapist at (575) 538-6888 or visit WNMU's Ombuds website at https://admin.wnmu.edu/ombuds/

For more information regarding WNMU's Title IX procedures, reporting, or support measures, please visit https://titleix.wnmu.edu/

XIV. **UNIVERSITY OFFICIAL COMMUNICATION POLICY:**

WNMU policy requires that all **official communication** with the University, other than in-class Canvas communications, be sent via Mustang Express. Emails sent to you by various WNMU departments related to your registration, financial account balance, changes in schedule, etc., will be sent to your **edu** email address. It is very important that you access your Mustang Express email periodically to check for correspondence from the University.

XV. WNMU CODE OF CIVILITY:

In order to promote a positive, professional atmosphere among students, faculty and staff, the following Code of Civility has been developed:

- **Respect**: Treat all students, faculty, staff and property with respect and in a courteous and professional manner. This includes all communications, whether verbal or written. Let your actions reflect pride in yourself, your university, and your profession.
- **Kindness**: A kind word and gentle voice go a long way. Refrain from using profanity, insulting slang remarks, or making disparaging comments. Consider another person's feelings. Be nice.
- **Truth:** Exhibit honesty and integrity in your dealings with fellow students, faculty and staff members. Don't lie, don't cheat, and don't steal.
- **Responsibility**: Take responsibility for your actions. This includes gracefully accepting the consequences of your behavior.
- **Cooperation**: Exhibit a cooperative manner when dealing with students, faculty and staff so we may all work towards our common goals and mission.
- **Acceptance**: Accept differences in others, as they accept differences in you. This includes diversity in opinions, beliefs and ideas and everything else that makes us unique individuals.
- **Professionalism**: Always conduct yourself in a manner that will bring pride to your profession, to Western New Mexico University, and, most importantly, to yourself.

XVI. HELPFUL LINKS AND RESOURCES FOR STUDENTS:

- ☐ WNMU Mission, Vision, and Values: https://admin.wnmu.edu/mission/
- ☐ WNMU Student Handbook: https://admin.wnmu.edu/handbooks/student-handbook/
- ☐ University policies: https://admin.wnmu.edu/policies/
- ☐ WNMU Business Office: https://businessaffairs.wnmu.edu/cashier-services/cashiers-office-students/

XVII. ADDENDUM: IMPORTANT INFORMATION

Email Policy: Please use your school email address (…@wnmu.edu) for all communications relating to this course.

Legal Name: Please **use only your registered names (First Name and Last Name in the Canvas course)** for **all work done in this course**.

Rights to change: I reserve the right to change the information contained in this syllabus with notice. The institution reserves the right to do so, with or without notice.

Tips to Succeed in the Course:

Please:

- Do not procrastinate. Procrastination is inimical to time. Begin your MLM assignments immediately. Complete at least 20 questions daily. MLM has learning aids that you can use right away. Ask questions on any concept you do not understand.

- Flipped Classroom Learning: Review each topic to be taught in the Course website and in your textbook (eBook), the videos and other multimedia resources in your MLM software prior to attending the Office Hours/Live Sessions. Please ask questions.

- Participate in the weekly discussions.

- Submit your project draft well ahead of time and work with me until you have made all necessary revisions based on my feedback before you submit your final project.

- This course will require a lot of your time. You will do a lot of work. Please be determined to work very hard.
  Review the information: https://mathematicseducation.appspot.com/#aboutMATH1010
  The good thing is that I am here to help you. Please ask questions. I am here to help you.

- Other information will be provided and/or discussed as applicable.
  (Tutoring, Peer Learning, etc.)

Tentative Class Schedule: Fall Semester, 2023

Week	Day/Date	eText Sections	Assessments Due
1	Monday, 08/14 – Saturday, 08/19	Section 0.1: Solving Problems and Explaining Solutions Section 1.1: The Counting Numbers Section 1.2: Decimals and Negative Numbers	(Initial Due) Section 0.1 Section 1.1 Section 1.2 DB 1 (Due)

Friday / August 18 (08/18)		Last day to Add/Drop/Audit a Course	
2	Sunday, 08/20 – Saturday, 08/26	Section 1.3: Reasoning to Compare Numbers in Base Ten Section 1.4: Reasoning about Rounding Section 2.1: Defining and Reasoning about Fractions	(Initial Due) Section 1.3 Section 1.4 Section 2.1-1st Section 2.1-2nd DB 2 (Due)
3	Sunday, 08/27 – Saturday, 09/02	Section 2.2: Reasoning about Equivalent Fractions Section 2.3: Reasoning to Compare Fractions	(Initial Due) Section 2.2 Section 2.3-1st Section 2.3-2nd DB 3 (Due)
4	Sunday, 09/03 – Saturday, 09/09	Section 2.4: Reasoning about Percent Section 5.4: Powers and Scientific Notation Section 7.1: Motivating and Defining Ratio and Proportional Relationships	(Initial Due) Section 2.4-1st Section 2.4-2nd Section 5.4 Section 7.1 DB 4 (Due)
Monday / September 4 (09/04)		Labor Day	
5	Sunday, 09/10 – Saturday, 09/16	Section 7.2: Solving Proportion Problems by Reasoning with Multiplication and Division Section 7.3: The Values of a Ratio: Unit Rates and Multipliers Section 7.4: Proportional Relationships Section 7.5: Proportional Relationships Versus Inversely Proportional Relationships Section 7.6: Percent Revisited: Percent Increase and Decrease	(Initial Due) Section 7.2 Section 7.3 Section 7.4 Section 7.5 Section 7.6 DB 5 (Due)
6	Sunday, 09/17 – Saturday, 09/23	Section 9.1: Numerical Expressions Section 9.2: Expressions with Variables Section 9.3: Equations Section 9.4: Solving Algebra Word Problems with Strip Diagrams and with Algebra	(Initial Due) Section 9.1 Section 9.2 Section 9.3 Section 9.4 DB 6 (Due)

7	Sunday, 09/24 – Saturday, 09/30	Section 9.6: Functions Section 9.7: Linear and Other Relationships Section 10.1: Lines and Angles	Section 9.6 Section 9.7 Section 10.1-1st Section 10.1-2nd DB 7 (Due)
8	Sunday, 10/01 – Saturday, 10/07	Section 10.2: Angles and Phenomena in the World Section 10.3: Circles and Spheres Section 10.4: Triangles, Quadrilaterals, and Other Polygons	(Initial Due) Section 10.2 Section 10.3 Section 10.4-1st Section 10.4-2nd DB 8 (Due)
9	Sunday, 10/08 – Saturday, 10/14	Section 11.1: Concepts of Measurement Section 11.2: Length, Area, Volume, and Dimension	(Initial Due) Section 11.1-1st Section 11.1-2nd Section 11.2-1st Section 11.2-2nd Project (Draft): Measurements and Units DB 9 (Due)
10	Sunday, 10/15 – Saturday, 10/21	Section 11.3: Error and Precision in Measurements Section 11.4: Converting from One Unit of Measurement to Another Section 12.1: Areas of Rectangle Revisited	(Initial Due) Section 11.3 Section 11.4-1st Section 11.4-2nd Section 12.1 Project: Measurements and Units DB 10 (Due)
11	Sunday, 10/22 – Saturday, 10/28	Section 12.3: Areas of Triangles Section 12.4: Areas of Parallelograms and Other Polygons Section 12.6: Area and Circumference of Circles and the Number Pi	(Initial Due) Section 12.3 Section 12.4 Section 12.6-1st Section 12.6-2nd DB 11 (Due)
Friday / October 27 (10/27)		Last day to Withdraw with a Grade of "W"	
12	Sunday, 10/29 – Saturday, 11/04	Section 12.8: Contrasting and Relating the Perimeter and Area	(Initial Due) Section 12.8 Section 12.9

		Section 12.9: Using the Moving and Additivity Principles to Prove the Pythagorean Theorem Section 13.1: Polyhedra and Other Solid Shapes	Section 13.1-1st Section 13.1-2nd DB 12 (Due)
13	Sunday, 11/05 – Saturday, 11/11	Section 13.2: Patterns and Surface Area Section 13.3: Volumes of Solid Shapes Section 13.4: Volume of Submerged Objects versus Weight of Floating Objects Section 14.7: Areas, Volumes, and Similarity	(Initial Due) Section 13.2 Section 13.3-1st Section 13.3-2nd Section 13.4 Section 14.7 DB 13 (Due)
14	Sunday, 11/12 – Saturday, 11/18	Section 15.1: Formulating Statistical Questions, Gathering Data, and Using Samples Section 15.2: Displaying Data and Interpreting Data Displays Section 15.3: The Center of Data: Mean, Median, and Mode Section 15.4: Summarizing, Describing, and Comparing Data Distributions	(Initial Due) Section 15.1 Section 15.2 Section 15.3 Section 15.4 DB 14 (Due)
15	Sunday, 11/19 – Saturday, 11/25	HAPPY THANKSGIVING	(Final Due) Project Draft
16	Sunday, 11/26 – Saturday, 12/02	Section 16.1: Basic Principles of Probability Section 16.2: Counting the Number of Outcomes Section 16.3: Calculating Probabilities of Compound Events Section 16.4: Using Fraction Arithmetic to Calculate Probabilities	(Initial Due) Section 16.1 Section 16.2 Section 16.3 Section 16.4 DB 15 (Due)
(Final Due) Measurements and Units Project: Thursday, 12/07; 11:59 pm MDT All MyLab Math (MLM) Assignments: Thursday, 12/07; 11:59 pm MDT			