MATH FOR EDUATION MAJORS I

The University of Toledo
Mathematics & Statistics Department, College of Natural Sciences and Mathematics
MATH1210-0XX, CRN XXXXX

_____

Instructor:	(Insert Name]	Class Location:	(Insert Building/Room)
Email:	(Insert E-mail Address)	Class Day/Time:	(Insert Days/Time)
Office Hours:	(Insert Days/Time)	Credit Hours:	3
Office Location:	(Insert Building/Office Number)		
Office Phone:	(Insert Phone Number)		
Term:	(Insert Semester and Year)		

_____

COURSE DESCRIPTION

Material covered includes problem solving techniques, set theory, number systems, foundations of arithmetic operations, basic number theory, algebraic structures of the integers, fractions and decimals.

STUDENT LEARNING OUTCOMES

The basic objective is to provide a general math course to satisfy the minimum math requirement for elementary mathematics educators to help them succeed in their teaching careers. A more detailed list of learning objectives is given below.

- *Number, Number Sense and Operations:*
  - **Number and Number Systems:** Work with sets as a basis for whole numbers; Work with whole numbers and numerations; Learn about the Hindu-Arabic system; work based on ordering and exponents; work with primes, composites, and tests for divisibility; find factors, greatest common factor and least common multiple; recognize the set of fractions; recognize the set of decimals;
  - **Meaning of Operations:** Add, subtract, multiply and divide whole numbers; add, subtract, multiply and divide fractions; work with percent
  - **Computation and Estimation:** Mental math and estimation; work written algorithms of whole-number operations; work with algorithms in other bases; Work with ratio and proportion problems; perform operations with decimals;
- *Mathematical Processes:* Work with Problem-Solving Process and Strategies

PREREQUISITES

Undergraduate level MATH 1180 Minimum Grade of C- or Undergraduate level MATH 1200 Minimum Grade of C- or Aleks Math Placement Test 46 or Aleks Math Placement Retest 46 or ACT Math 20 or Math - Coll Algebra Placement 10 or Math - Elem Algebra Placement 12 or SAT Mathematics 480.

TEXTBOOK:

- *Mathematics for Elementary Teachers: A Conceptual Approach,* Bennett/Burton/Nelson/Ediger, 10th Ed., McGraw-Hill 2016, (Includes Connect Plus access) ISBN: 9781260023688, Connect Plus Access only ISBN: 9781259293436.
- Connect Plus online access. Online access is provided with the text or may be purchased with a credit card the first time you sign in through Blackboard. The textbook is recommended, but not required. An e-book is included with access to Connect Plus.

- Access to a PC or Mac connected to the web and on which you have privileges to install browser plug-ins.

CALCULATOR
No calculators may be used during quizzes or exams.

UNIVERSITY POLICIES:

POLICY STATEMENT ON NON-DISCRIMINATION ON THE BASIS OF DISABILITY (ADA)
The University is an equal opportunity educational institution. Please read The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.

ACADEMIC ACCOMMODATIONS
The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations/adjustments in this course please contact the Student Disability Services Office (Rocket Hall 1820; 419.530.4981; studentdisabilitysvs@utoledo.edu) as soon as possible for more information and/or to initiate the process for accessing academic accommodations. For the full policy see:
http://www.utoledo.edu/offices/student-disability-services/sam/index.html

ACADEMIC POLICIES:

STUDENT PRIVACY
Federal law and university policy prohibits instructors from discussing a student's grade or class performance with anyone outside of university faculty/staff without the student's written and signed consent. This includes parents and spouses. For details, see the "Confidentiality of Student Records (FERPA)" section of the University Policy Page at http://www.utoledo.edu/policies/academic/undergraduate/index.html.

MISSED CLASS POLICY
If circumstances occur in accordance with "The University of Toledo Missed Class Policy" (found at http://www.utoledo.edu/policies/academic/undergraduate/index.html) result in a student missing a quiz, test, exam or other graded item, the student must contact the instructor in advance by phone, e-mail or in person, provide official documentation to back up his or her absence, and arrange to make up the missed item as soon as possible.

ACADEMIC DISHONESTY
Any act of academic dishonesty as defined by the University of Toledo policy on academic dishonesty (found at http://www.utoledo.edu/dl/students/dishonesty.html) will result in an F in the course or an F on the item in question, subject to the determination of the instructor.

COURSE EXPECTATIONS:

ATTENDANCE AND MISSED WORK POLICY

You are expected to attend each class session. Be on time for class. The class will consist of two activities on most days: review of homework problems and PRESENTATION OF NEW IDEAS. The class will generally begin with a call for questions. This is your chance to clarify any problems that you may have.   In addition to class, you will also have to complete section homework and chapter quiz. More information will be given the first day of class.

If you attend class, it is assumed that you will participate actively by asking questions and participating in discussions. It is your responsibility to be aware of any announcements or calendar changes made during lecture.   If you have an excused absence (based on UT's missed class policy http://www.utoledo.edu/policies/academic/undergraduate/index.html , the work you missed must be made up by the next class, unless you have made other arrangements with the instructor. You may communicate any expected or unexpected absences via written communication, email, and/or by voice mail. In the event of an emergency or an unavoidably short notice of absence, you must present an approved written excuse upon your return to class. Approved written excuses include, but are not limited to, doctor's notice, funeral programs, court summons, and other. Otherwise any missed exams will be recorded as "0%". Daily quizzes may not be made up for any reason.

CELL PHONES
All cell phones must be turned to silent/vibrate during class and must be put out of sight. Any visible/audible cell phone will be confiscated until the end of class or student will be asked to leave. Cell Phones will be collected during Exam times.

GRADING POLICY
The categories used for evaluation in this course and the percent weights associated with them are:

Participation	5%
Homework	14%
Quizzes	14%
Exam 1	17%
Exam2	17%
Exam 3	17%
Final Exam	20%

Overall %	Grade
90 – 100%	A
80 – 89.9%	B
70 – 79.9%	C
60 – 69.9%	D
0 – 59.9%	F

Plus/minus grades are assigned within 2% of the grade boundary

PREPARATION FOR CLASS
You are expected to prepare for class, to have read the indicated sections prior to the class session and have your homework completed by the indicated due date. This is a three credit hour course and you should expect to spend 5 to 8 hours outside of class reading, studying and doing homework problems. The syllabus schedule indicates the order in which the sections will be discussed.

HOMEWORK
Homework assignments are available on Blackboard and are due the day after the section is complete. Homework problems allow you to test your knowledge and improve your skills. It is a very important part of

this course, since you learn the material by doing the problems. Working together is allowed, even encouraged, however, be sure to do your own work. Homework is graded on completeness and correctness (with more emphasis on the completeness).

QUIZZES

Quizzes are done on Blackboard and consist of questions that will help you think like a teacher. Each chapter will have a quiz to complete. Quizzes remain available until the day the next chapter is taught. The best way to study for quizzes is to attend class regularly and participate in any activities done in class.

INCOMPLETES, EXTRA CREDIT, ETC.

University and departmental policy stipulate that incompletes will be granted only in cases where a *substantial portion* (usually at least 3/4) of the class has been completed *successfully* and unavoidable circumstances prevent completing the course by the end of the semester. Incompletes are not intended to rescue students who have performed poorly, or those who have not participated in the class. Students often come to me at the end of the semester after realizing that they are not likely to pass wanting an incomplete or extra credit or some other way of avoiding disaster. Generally, the end of the semester is too late. I don't usually allow extra credit, and particularly not for individual students. You need to keep up with the class, participate in the labs, get the homework done on time and prepare for the exams.

IMPORTANT DATES

- Final Exam: _____
- The last day to ADD/DROP classes: _____
- The last day to WITHDRAW from classes: _____
  **Note: Instructors cannot withdraw students from class. Any student who has not withdrawn from class by _____ will receive a letter grade for the class!

STUDENT SUPPORT SERVICES

I have office hours every day from [_:__] to [_:__] . If this conflicts with your schedule, be sure to see me before/after class or contact me to arrange an alternate time. See me at the first sign of confusion.

Mathematics tutoring is provided by the Mathematics Learning and Resource Center and is located in the basement of Carlson Library - phone ext. 2176. It operates on a walk-in basis. MLRC hours can be found at http://www.math.utoledo.edu/mlrc/MLRC.pdf . Be sure to bring your book, notes from class, and specific problems you want help with. Tutors are not teachers. They are there only to help with *specific problems.*

TENTATIVE SCHEDULE

	Chapter	1	Problem Solving	
Week 1		1.1	Introduction to Problem Solving *Mathematical Processes*	
Week 2		1.2	Patterns and Problem Solving *Mathematical Processes*	
	Chapter	2	Sets and Reasoning	
Week 3		2.1	Sets as a Basis for Whole Numbers *Number and Number Systems*	
	Exam 1			
	Chapter	3	Whole Numbers: Operations and Properties	
Week 4/5		3.1	Numeration Systems *Number and Number Systems*	
Week 5		3.2	Addition and Subtraction *Meaning of Operation/Computation and Estimation*	
Week 6		3.3	Multiplication *Meaning of Operations/Computation and Estimation*	
Week 6/7		3.4	Division and Exponents *Meaning of Operations/Computation and Estimation*	
	Exam 2			
	Chapter	4	Number Theory	
Week 8		4.1	Factors and Multiples *Number and Number Systems*	
Week 8/9		4.2	Greatest Common Factor and Least Common Multiple *Number and Number Systems*	
	Chapter	5	Integers and Fractions	
Week 10		5.1	Integers *Number and Number Systems/Computation and Estimation*	
Week 11		5.2	Introduction to Fractions *Number and Number Systems*	
Week 12		5.3	Operations with Fractions *Computation and Estimation*	
	Exam 3			
	Chapter	6	Decimals: Rational and Irrational Numbers	
Week 13		6.1	Decimals and Rational Numbers *Number and Number Systems/Computation and Estimation*	
Week 14		6.2	Operations with Decimals *Computation and Estimation*	
Week 15	Final Exam			