



Fundamentals of Math I – MATH 1350.88

Course Syllabus: Fall 2017

“Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	1:30 – 4:00	9:30 – 10:50 1:30 – 4:00	1:30 – 4:00	9:30 – 10:50 1:30-4:00	As needed	Professor checks emails multiple times a day.

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Catalog Course Description (include prerequisites): This course includes concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. Prerequisite: MATH 1314 (College Algebra) or its equivalent.

Required Textbook(s):

Long, DeTemple, Millman (2015). Mathematical Reasoning for Elementary Teachers, 7th Edition.

You are not required to have a hardcopy of the text, but it is recommended. However, you **MUST** purchase the MyMathLab Access Code that has the e-book.

Note: The NTCC Bookstore link is at www.ntcc.edu.

Publisher: Pearson, Boston, MA

ISBN 0-321-90099-5 (Book with MyMathLab access code).

Recommended Reading(s):

None

Student Learning Outcomes:

Upon successful completion of this course, students will

The student will be able to:

1350.1 Systematically solve problems using various strategies.

1350.2 Perform and model addition, subtraction, multiplication, and division on sets, subsets, and various number sets.

1350.3 Explore patterns and sequences as inductive and intuitive methods for problem solving.

1350.4 Apply and use properties of the real number system.

1350.5 Solve applications using fractions, decimals, percents, ratios, and proportions.

SCANS Skills:

N/A

Lectures and Discussions:

Since this is an online class, students must be self-motivated to keep up with the due dates, turn in assignments ON TIME, and take Exams as scheduled. Students need to check their email accounts daily AND log in to MyMathLab to make sure they receive all communications from the professor.

Evaluation/Grading Policy:

Three major 100 point examinations, evenly spaced throughout the semester, will be given and each will be worth 15% of the final grade (total 45% of final grade). If an exam is missed or failed, the highest possible make-up grade is a 70 (with instructor notification prior to the exam missed). The 2nd exam and the Final Exam MUST BE TAKEN IN PERSON IN THE NTCC TESTING CENTER. If you do not live near NTCC, you may take your exam from a nearby testing facility (student responsible for getting testing site information to me and also for paying any fees the alternate testing facility may charge).

The average of a series of homework assignments will be worth 20% of the total grade (all homework is on MyMathLab). There will be 2 online Projects that will be worth 15% of your grade. The projects are defined in detail below. Please read all the information and begin immediately on both projects. Exact due dates will be posted soon. Each of these will be discussed in detail as the semester progresses.

All homework due dates are posted on MyMathLab. Homework is due on the due date...no exceptions.

A comprehensive final examination will contribute 20% to the final grade, and the final must be taken in the testing center of the NTCC campus. If you do not live near NTCC, you may take your exam from a nearby testing facility (student responsible for getting testing site information to me and also for paying any fees the facility may charge).

Tests/Exams:

3 Online Tests (Exam #2 on campus)	45%	(15% each)
Final Exam (on campus)	20%	
Online Assignments (MyMathLab)	20%	
2 Online Projects	15%	

TOTAL ----- 100%

"A"	90%
"B"	80%
"C"	70%
"D"	60%
"F"	Below 60%

To reiterate, Exam #2 and the FINAL EXAM must be taken in person, on campus. It will be online in the testing center on campus. You must bring a photo I.D. of yourself, preferably your student I.D. If you live far away, and cannot travel to the NTCC campus, you may take the test at an alternate college/university testing center. You must contact them, get their permission to take the test there, and then send me their contact information. I will set the exam up with them at that time.

All problems assigned to each section are located in the Homework tab in MyMathLab. Dates for each section are located in your MyMathLab Calendar.

- 1.1 An Introduction to Problem Solving
 - 1.2 Polya's Problem-Solving Principles
 - 1.3 More Problem-Solving Strategies
 - 1.4 Algebra as a Problem-Solving Strategy
 - 1.5 Additional Problem-Solving Strategies
 - 1.6 Reasoning Mathematically
 - 2.1 Sets and Operations on Sets
 - 2.2 Sets, Counting, and the Whole Numbers
 - 2.3 Addition and Subtraction of Whole Numbers
 - 2.4 Multiplication and Division of Whole Numbers
- EXAM 1(Chapters 1 & 2)
- 3.2 Algorithms for Adding and Subtracting Whole Numbers
 - 3.3 Algorithms for Multiplication and Division of Whole Numbers
 - 3.4 Mental Arithmetic and Estimation
 - 4.1 Divisibility of Natural Numbers
 - 4.2 Tests for Divisibility
 - 4.3 Greatest Common Divisors and Least Common Multiples
- EXAM 2 (Chapters 3 & 4)
- 5.1 Representation of Integers
 - 5.2 Addition and Subtraction of Integers
 - 5.3 Multiplication and Division of Integers
 - 6.1 The Basic Concepts of Fractions and Rational Numbers
 - 6.2 Addition and Subtraction of Fractions
 - 6.3 Multiplication and Division of Fractions

- 7.1 Decimals and Real Numbers
- 7.2 Computations with Decimals
- 7.3 Proportional Reasoning
- 7.4 Percent

EXAM 3 (Chapters 5, 6, & 7)

COMPREHENSIVE FINAL EXAM (Over all chapters)

Project #1 Description:

Find a children's book that teaches a math lesson. For instance, "The Greedy Triangle" by Marilyn Burns is a cute story about shapes and angles. I created an activity with play-doh to help students apply what the book teaches (they make different shapes out of the play-doh). You will need to do something similar: find a children's book that you like and create a "hands-on" activity to go along with it. You will be writing this up and placing it on the Discussion Board on Blackboard in a few of weeks (due date will be announced soon), so please start looking now.

NOTE: Your best bet is to find a teacher (can be any grade level) and ask her to recommend a book and activity...she probably has one you can borrow. You can also google this online...I have found many good activities there. Just be sure to give the author credit on the Discussion Board.

Project #2 Description:

Near the end of the semester (exact date will be sent out shortly), you will be presenting a lesson plan via the web. You will need to video yourself teaching a math lesson. You will be posting this on Blackboard. I will send more details out about that later, BUT for now you need to start looking for a complete lesson plan either online or from a school teacher (preferably). This lesson plan should be geared toward the age group you want to one day teach, and it should of course be a math lesson. Some examples could be a lesson on telling time, shapes, fractions, decimals, addition, subtraction, multiplication, division, etc. It can be any math topic...but you must have a complete lesson plan for it. This should be longer than the book project. It needs to actually "teach" a lesson to the students. And, you must have a hands-on activities to go along with your lesson. Kids need to use their tactile/kinesthetic senses when learning, so please make sure your lesson has something for them to "manipulate" during the lesson. Examples of manipulatives are blocks, shapes, dice, toothpicks, bingo chips, rulers, hands on a clock, paper money, coins, etc. (anything they can touch and learn from) .

You will need to video yourself teaching this lesson (talk to the camera as if you were talking to children – actually teach the lesson and demonstrate concepts with manipulatives. The video should be 8 – 10 minutes in length. Below you will find instructions on how to upload the video on Blackboard.

Step -by- step instructions for posting your video lesson are on Blackbaord and below (on syllabus).

The best way to video yourself is with your computer webcam. If you do not have one on your computer, you can get one at Walmart. They are pretty inexpensive to purchase. You can also use a video camera, but it will be more complicated because you then have to transfer the video to your computer.

Steps to complete the Project #2 (video) assignment (due date to be sent out later):

1. Each student should create an account at <http://www.youtube.com/>.
2. Video the presentation using a webcam or video recorder (using a video recorder will require the student to load the video on their computer).
3. Go to the YouTube account and select UPLOAD VIDEO.
4. Once the video is uploaded from the computer to YouTube, there will be a link that YouTube generates for the video.
5. Copy and paste this link into the Discussion Forum that was created for the assignment in Blackboard.
6. Once it is pasted, all students should be able to click on the link and watch the video.

Before you post your video, you will need to address the following questions that will be in a Discussion Board in Blackboard (not yet posted). I will post this discussion later in the semester.

(This is the section that will be on the Blackboard Discussion Board later in the semester). Please enter the following information for your lesson plan:

- 1) Your name
- 2) Title of your lesson
- 3) Objective of your lesson (what it will teach)
- 4) Materials needed for your lesson (anything you or students will use during the lesson)
- 5) Procedure of lesson (list these in steps - list how you would go about teaching the lesson); be as detailed as possible here (leave directions good enough for a substitute teacher to know how to teach your lesson)
- 6) Be sure to list your dependent practice for the lesson - what you will have students do WITH your help or in groups/partners
- 7) List the independent practice - what students will do ALONE to demonstrate that they've learned the lesson
- 8) Closure - how will you close (summarize) your lesson with your students

Other Course Requirements

Students should have a computer that is Internet accessible, and they should have the ability to navigate through a website, use a chat room, post remarks to a discussion board, and email.

Student Responsibilities/Expectations:

Attendance:

Students are expected to check in to the class often (AT LEAST twice a week) on Blackboard and MyMathLab to find the assignments and communications from the instructor. Since this is an online class, students must be self-motivated to keep up with the due dates, turn in assignments ON TIME, and take Exams as scheduled.

Students in the online section of this class must submit weekly assignments on the due dates to remain enrolled in the class. The instructor reserves the right to administratively drop a student who goes beyond two weeks in turning in online assignments unless the instructor is notified and given a valid reason for late assignments.

NTCC Academic Honesty Statement:

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the [NTCC website - Special Populations](#).

Family Educational Rights And Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Other Course Policies:

There will be no cell phone usage in the classroom. Students will be warned if caught using a phone during class. A student will be removed from class if the disruption continues.

The college's official means of communication is via your campus email address. I will use your campus email address, Blackboard, and MyMathLab to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.