MATH 120-501 -- Tuesday & Thursday 10:30 - 11:45 AM in A133

Instructor: Dr. Eva Rivera Lebrón   **Email:** eriveral@unm.edu
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MyMathLab Course Code: rivera54514
Office Hours: **STEM Center:** MW 9:00 am – 10:00 am, 1:30 pm – 2:30 pm
                    A-123: TTh 1:30 pm – 3:00 pm or by appointment

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COURSE DESCRIPTION:

Math 120 covers linear equations and inequalities, polynomials, factoring, exponents, radicals, fractional expressions and equations, quadratic equations, perimeters, areas of simple geometric shapes, and logarithms. There is an emphasis on problem solving skills. Math 120 is acceptable as credit toward graduation in some programs but not acceptable to satisfy the UNM Core Curriculum or New Mexico Lower-Division General Education Common Core Curriculum requirement in Mathematics. Grade option: A, B, C, CR/NC.
Prerequisites/placement: Successful completion of MATH 100 (C or CR)or minimum pre-algebra COMPASS score of 57 or algebra COMPASS score of 34, or math ACT ≥ 19, or math SAT ≥ 450.

Course Objectives:

In this course, we will explore linear functions, systems of linear equations, inequalities, polynomials and factoring, rational functions, and radical functions, and we will introduce exponential and logarithmic functions. Often in a mathematics course the emphasis in lecture is on acquisition of skills. In this course we will focus mainly on constructing meaning. What this means in terms of your responsibilities and what will happen during class time is explained below.

Student Learning Outcomes in regard to skills acquisition:

Upon successful completion of this course, students will be able to:
1. Sketch the graphs of linear, quadratic, and exponential functions.
2. Solve systems of two linear equations.
3. Solve quadratic equations using factoring, quadratic formula, and the square root method.
4. Solve equations containing rational expressions.
5. Perform operations on polynomials and factor certain types of polynomials.
6. Solve polynomial equations by factoring.
7. Correctly use function notation and vocabulary related to functions.
8. Find the value of a function for a given domain value.

Student Learning Outcomes in regard to conceptual understanding:

Upon successful completion of this course, students will be able to:
1. Interpret slope in relation to variable coefficients and as a rate of change.
2. Apply solution methods learned to "real-world" problems.
3. Analyze solutions and give them contextual meaning.
4. Actively and effectively work in groups to solve problems and increase understanding of concepts, drawing on the skills and knowledge of all group members.

<u>**REQUIRED MATERIALS**</u>:
- **Textbook:** Intermediate Algebra: Concepts and Applications, *9th edition*, by *Marvin Bittinger, David Ellenbogen, Barbara L. Johnson*.
- **Pearson (MyMathLab) Student Access Code:** This code will provide you access to all of the online materials for the course including the quizzes that will be required for the course. If you purchased a new book at the bookstore, it should have come with a MML kit that includes your access code. If you did not purchase a new book, then you can purchase a code directly from the website, www.pearsonmylabandmastering.com. **You must register for MML by the end of the 1ˢᵗ week of classes or risk being dropped from the course.**
- **Notebook, pencil, highlighter, notecards, calculator.**
- **Calculator:** A scientific calculator will be desired. Students may use a calculator for quizzes and exams. **No graphing calculators and/or phones** will be allowed on any exams or quizzes, unless otherwise announced. **Students cannot use their phone as a calculator during a quiz or exam AND students cannot share a calculator**.

Grading Scale (Note: + and – of grades are possible but only if of benefit to the student)

A	90 – 100%		CR	Credit 72 – 100%
B	80 – 89%		NC	No Credit < 72%
C	70–79%			
D	60–69%			
F	< 59%			

Attendance and Class Participation	**10%**
Weekly Tutor Paper	**10%**
MML Homework	**10%**
Journal and Guided Notebook	**10%**
Unit Exams	**30%**
Cumulative Final Exam*	**30%**

* <u>You must receive at least a 70% on the final and have a 72% overall course average to <u>pass the course.</u> This is not negotiable.</u>

IMPORTANT DATES with respect to this class:

First Exam: Thursday, February 4, 2016 covering review material.

Martin Luther King Day (No classes): Monday, January 18, 2016

Last date to drop without a grade: Friday, February 5, 2016

Spring Break: Sunday March 13, 2016 – Sunday March 20, 2016

Final Exam Day: **Thursday, May 10, 2016 from 10:30 am – 12:30 pm at A-133**

ATTENDANCE POLICY: The student bears full responsibility for the material and procedural information

covered in class. If a student misses 2 classes in the first two weeks or 3 consecutive class periods or 5 total, the student may be dropped from the class. Each absence will result in a 5% reduction in the Attendance & Participation grade.

THE COURSE: Homework, Tutor Paper, Journal and Unit Exam: We will cover nearly the entire book. Please note that the book and MML are not perfectly aligned.

You must <u>register for MML by Friday, August 21, 2015</u> and complete each of the "Things I should remember" Review assignments to a grade of at least 80% by midnight on Tuesday, September 1, 2015 or risk being dropped from the course.

- **Homework:** Homework assignments are done and graded on MyMathLab. You should expect to spend 6-9 hours in addition to the lectures each week to study for this course and complete the homework assignments. The due date of each homework assignment is specified on MyMathLab. Please check there for homework after each class, note the due dates and allow ample time for completion. This class moves quickly. At least one new topic will be covered and a new homework assignment will be assigned every class. <u>NOTICE</u>: Written homework assignments might be given/assigned in class**.** However, these will not be collected, unless notified by the instructor.

- **STEM Center Tutor Paper:** Each week, starting with the first week of class, there will be a Green Tutor Paper at the STEM Center. This paper are worth 10% of the grade. They will be available from STEM Center's opening time Monday until closing time Friday. These papers will help you practice and reinforce what have been covered in class, and sometimes it will also give you a preview of what is coming up in the following week.

- **Journal:** You are required to have a bound composition book of at least 75 pages for this semester long journal. A list of math terms or concepts commonly used in class will be posted on Blackboard. This terms/concepts will be separated by tests. For example: The first list of terms/concepts will be about the material that will be covered in test #1. For each term/concept, you must define each term in your own words and provide at least one example. When working on your journal, be creative, but be precise, and **<u>organized</u>**. The journal must be clear to read and follow. Each journal must include a table of content. The journal will be collected on every test day for check-up and grading.

- **Guided Notebook:** For each section covered in this class you are required to print out and complete the guided notebook. This must be kept together in a binder. They will be check once a week.

- **Unit Exams:** There will be at least three unit exams. You must have at least 80% on the MML homework related to the test material in order to take the unit exam. A 3x5 notecard and a calculator will be allowed for the unit exam.

- **Retakes:** I will give make up unit exams to anyone that would like to retake it to improve their grade or if you missed the exam for any reason. In order to do this, you must complete the "Work Analysis" page for every problem that you miss on the test or for the whole test if you miss the test, and have **90% or more** on the Optional Review for the test posted on MML. Retakes (Make-ups) must be taken

up to a week after the test is returned. For example: If the test is given Monday and I returned the graded test on Wednesday, you will have until the next Wednesday to retake the test. <u>NOTICE</u>: A calculator will be allowed for the retake. A 3x5 notecard will **not** be allowed on the retake.

- **Practice Tests:** Optional (but highly recommended). They will appear in Blackboard Learn as exams approach, there will also be an optional practice test in MML .

UNM EMAIL/BLACKBOARD LEARN ACCESS: Beginning Fall 2015 semester, all UNM-Valencia students will need a UNM Net ID which can be created by going to: http://it.unm.edu/accounts/. UNM Net ID will give you access to the computer labs on campus, Blackboard Learn and UNM Email.

SUPPORT SERVICES: The Valencia Campus Library provides a quiet atmosphere for study and is an excellent resource for supplementary materials. Audiotapes and videotapes are available for student use through the library. The STEM Center offers tutoring at no cost to the student. For best results, schedule appointments for tutoring at (505) 925-8515. The Learning Center (925-8907) also offers tutoring at no cost to the student. The online tutor, Ryan Baltunis, can be reached at 925-8553 or found in LRC 118. Students who miss tutoring appointments may be denied future appointments.

EXPECTATIONS: Students are expected to conduct themselves in a polite, courteous, professional and collegial manner. Cell phones must be set on silent. Please step into the hall if you need to take a call during class. Cell phones must be turned off during exams.

<u>**UNM'S POLICY ON HONESTY IN ACADEMIC MATTERS:**</u> Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, including dismissal, against any student who is found responsible for academic dishonesty. Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests or assignments, claiming credit for work not done or done by others; hindering the academic work of other students; and misrepresenting academic or professional qualifications within or outside the University.

<u>**DISABILITY STATEMENT:**</u> If you have a documented disability, please provide me with a copy of your letter from Equal Access Services as soon as possible to ensure that accommodations are provided in a timely manner.

COMPUTER LAB RESPONSIBILITY: Please be advised that use of computer labs on UNM properties is governed by "Policy 2500: Acceptable Computer Use" which can be found at http://policy.unm.edu/university-policies/2000/2500.html. Food and drink are also prohibited in any computer lab on campus. Anyone violating these policies is subject to possible suspension and loss of computer lab privileges.

Math 106: You are strongly recommended to enroll into MATH 106, which is a one credit hour class that offers extra help and practice to students taking MATH 120.

Tentative Schedule MATH 120 – 16 weeks (Subject to change at the instructor's discretion)

Week #	Tuesday	Thursday
1	• Basics of Algebra **(HW 1)** • Operations with real numbers **(HW 2)** • Solving equations **(HW 3)**	• Properties of exponents **(HW 5)** • Scientific notation **(HW 6)** • Introduction to problem solving **(HW 4)**
2	• Graphs **(HW 7)** • Linear graphs **(HW 10)**	• Linear Functions **(HW 9)** • Equations of lines **(HW 11)**
3	• Functions **(HW 8)** • Algebra of functions **(HW 12)**	**Test #1**
4	• Intro to polynomials **(HW 19)** Multiplication of polynomials **(HW 20)**	• Common factoring and factoring by grouping **(HW 21)**
5	• Factoring trinomials **(HW 22)** • Factoring perfect-square and difference of square **(HW 23)**	• Factoring-A general strategy **(HW 24)** • Applications of polynomials **(HW 25)**
6	• Quadratic equations **(HW 37)**	• Quadratic formula **(HW 38)** • Solutions of quadratic equations **(HW 39)**
7	• Applications using quadratic **(HW 40)**	• Equations reducible to quadratic **(HW 41)**
8	**Review Test #2**	**Test #2**
9	**SPRING BREAK**	
10	• Quadratic functions and their graphs **(HW 42)**	• More about graphing quadratic functions **(HW 43)**
11	• Problem solving and quadratic equations **(HW 44)**	• **Test #3**
12	• Multiplication and division of rational expressions and functions **(HW 26)** • Rational equations **(HW 28)** • Division of polynomials **(HW 29)**	• Solving applications using rational equations **(HW 30)** • Radical expressions and functions **(HW 31)**
13	• Rational numbers as exponent **(HW 32)** • Multiplying rational expressions **(HW 33)** • Dividing rational expressions **(HW 34)**	• Solving radical equations **(HW 36)** • Expressions containing several radical terms **(HW 35)**
14	**Test #4**	• System of two equations **(HW 13)** • Solving system by substitution or elimination **(HW 14)**
15	• System of equations applications **(HW 15)** • Inequalities and applications **(HW 16)**	• Compound inequalities **(HW 17)** • Equations with absolute value **(HW 18)**
16	• Introduction to logarithmic and exponential equations **(HW 45)**	**Review Final Exam**