

MATH 121-551 DUAL

Instructor: Dr. Alfonso Heras

Office: A142A

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COURSE DESCRIPTION:

Preparation for Math 150 and 180. The study of equations, functions and graphs, especially linear and quadratic functions. Introduction to polynomial, rational, exponential and logarithmic functions. Applications involving simple geometric objects. Emphasizes algebraic problem solving skills. Meets New Mexico Lower Division General Education Common Core Curriculum Area II: Mathematics (NMCCN 1113).

Prerequisite: ACT=>22 or SAT=>510 or MATH 120 or Compass Algebra >54 or College Algebra >33.

REQUIRED MATERIALS:

- **Textbook (Or school Book):** Intermediate Algebra: Concepts and Applications, *9th edition*, by Marvin Bittinger, David Ellenbogen, Barbara L. Johnson.
- **Pearson (MyMathtest:MMtest) 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.
- **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 < 70%
C	70–79%		
D	60–69%		
F	< 59%		

Grades Distribution

UNM Instructor

The UNM instructor will be in charge of the following part of the final grade of the students:

The midterm Test: 20% of the final grade. (It will be prepared and graded by the UNM instructor).

MyMathtest: (online Homework) 20% of the final grade.

The Cumulative Final Test*: 25% of the final grade. (It will be prepared and graded by the UNM instructor).

The grand total for the unum instructor will be 65% of the final grade of the student.

The School Teacher

The school teacher will be in charge of the following part of the final grade of the students:

Unit Tests __%, written homework __%, in class participation __%, attendance __% and others __%.

The grand total for the school teacher will be 35% of the final grade of the student.

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

IMPORTANT DATES with respect to this class:
See The UNM online Schedule

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, Unit Exams: Please note that the book and MMt are not perfectly aligned.

- **Homework:** The online homework assignments are done and graded on MyMathtest. 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 MyMathtest. 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. NOTICE: Written homework assignments might be given/assigned in class.
- **Journal (Optional for the school teacher to collect):** 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 organized. 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.
- **Practice Tests (For the midterm and the final test):** Optional (but highly recommended). They will appear in Blackboard Learn as exams approach, there will also be an optional practice test in MMtest.

UNM EMAIL/BLACKBOARD LEARN ACCESS: Beginning Fall 2016 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.

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.

UNM'S POLICY ON HONESTY IN ACADEMIC MATTERS: 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.

DISABILITY STATEMENT: 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.

Student Learning Outcomes and General Competencies Math 121
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Competency 1: Communication: Students will use proper mathematical notation and terminology to communicate mathematical phrases.

SLO 1: Students will use correct mathematical notation and terminology and illustrate that they can read and interpret graphical representations of information.

SLO 2: Students will be able to verbalize the steps needed to solve a problem and show that they can read a mathematical text.

Competency 2: Solve various kinds of equations: Students will solve a variety of equations from linear, polynomial, rational through to exponential and logarithmic.

SLO 1: Students will be able to solve linear equations and systems of two linear equations.

SLO 2: Students will be able to solve polynomial equations including quadratics and factorable higher order equations.

SLO 3: Students will be able to solve rational equations by identifying least common multiple for simplification of the equation and by identifying extraneous solutions to the original equation.

SLO 4: Students will be able to solve radical equations using inverse properties of exponents.

Competency 3: Working with functions: Students will demonstrate an understanding of the various families of functions.

SLO1: Students will identify the domain and range for a given function

SLO 2: Students will be able to find the function value for a given domain value, and be able to determine domain values for which a given function value occurs.

SLO 3: Students will be able to create a composite function given two or more functions and decompose a given function into its basic parts.

SLO 4: Students will be able to recognize whether a given function is from the polynomial, rational, radical, exponential, or logarithmic family

Competency 4: Working with graphs: Students will demonstrate the connection between algebraic functions and their graphs on the Cartesian plane

SLO 1: Students will identify slope as a rate of change within the context of a given word problem, expressing in their own words what the slope represents for that specific situation.

SLO 2: Students will be able to construct appropriate equations to model a situation presented to them through a word problem. and extract information from a word problem in such a way that allows them to identify the general behavior of the data through graphing.

Competency 5: Modeling and solving applied problems: Students will construct mathematical models which reflect real world scenarios. They will identify the information given and find the requested information.