

## MATH 121-502 ISBN 22947 Class 12:00 pm-1:15 pm VAAS 125

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**Instructor:** Dr. Alfonso Heras

**Office:** A142A

**MyMathLab**

**Office Hours:** (@ my office) **M-TH: 8:00 - 9:00 am** and (@ the STEM Center) **T\Th: 10:30 - 11:30**

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**Email:** [aheras@unm.edu](mailto:aheras@unm.edu)

**Phone:**

### **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:** College Algebra New Mexico Edition (similar to 9<sup>th</sup> edition), by Michael Sullivan
- **Pearson (MyMathLab) Student Access Code:** This code will provide you access to all of the online materials for the course, including homework assignments and quizzes that will be required for the course. If you purchased a new book at the bookstore, it should have come with a MyMathLab 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.coursecompass.com](http://www.coursecompass.com).
- **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 Distribution:**

Attendance and Class Participation	10%
Weekly Tutor Paper (@ the STEM Center)	10%
MML Homework	20%
Unit Exams	20%
Cumulative Final Exam*	30%

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

## 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 Less than 72%
C	70–79%		
D	60–69%		
F	< 59%		

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**ATTENDANCE POLICY:** 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 student bears full responsibility for the material and procedural information covered in class.

**Attendance and participation:** You are required to come to class every day, on time and prepared. You must be ready to work on the topic(s) and activities of the day.

- **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.
- **STEM Center Tutor Paper:** Each week, there will be a Green Tutor Paper at the STEM Center. This paper are worth 10% of the grade. They will be available from 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.

**Final Exam:** There will be a cumulative final exam at the end of the semester. It accounts for 30% of your class final grade. **You must receive at least a 70% on the final and have a 70% overall course average to pass the course. This is not negotiable.**

**Math 107:** You are strongly recommended to enroll into math 107, which is a one credit hour class that offers extra help and practice to students taking math 121.

**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.

**IMPORTANT DATES with respect to this class: See the UNM Valencia Calendar (online)**

**Student Learning Outcomes and General Competencies Math 121  
– University of New Mexico**

**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.**