MATH 121-502 -- Tuesday & Thursday 1:30-2:45 PM in A125

Instructor: Annette Hatch   **Email:** ahatch2@unm.edu
Office: A123   **Phone: 925-8642**
MyMathLab Course Code: hatch19862
Office Hours: STEM Center: T-Th 9:00-10:00 AM & MW 1:00-2:00 PM
         A123: T 12:00-1:00 PM & MW 2:00-3:00 PM
         OR by app't.

COURSE DESCRIPTION: Math 121, College Algebra, is the study of equations, functions and graphs, especially linear and quadratic functions. Introduces polynomial, rational, exponential and logarithmic functions and applications involving simple geometric objects. Emphasizes algebraic problem solving skills. Prerequisite: Math 103, Math 120 or test placement.

COURSE MATERIALS:
  • **Textbook Hardcopy Optional:** *College Algebra*, NM Edition by M. Sullivan
  • **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 underline beginning of the 2nd week of classes or risk being dropped from the course.**
  • **Notebook, pencil, calculator:** Note: A scientific calculator will be desired. Students may use a calculator unless otherwise announced. Graphing calculators and/or phones will not be allowed on the final. Students may not share a calculator during exams.

Grading Scale (Note: + and – are possible but only will be given 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%**
MML Homework	**15%**
Written Quizzes (first quiz on 1/21)	**15%**
Cumulative Unit Tests	**30%**
Cumulative Final Exam*	**30%**

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

IMPORTANT DATES with respect to this class:
     Register for MML by Monday, January 25, 2016
     3 Sections of Review on MML due Wednesday, January 27, 2016
     First Exam: Thursday, January 28, 2016 covering review material.
     Last date to drop without a grade: Friday, January 29, 2016
     Spring Break: March 13-20, 2016
     Final Exam: 1:30-3:30 PM Thursday, May 12, 2016 in A125

Schedule of Topics (Subject to Change)

Week	Dates	Topic
1	1/19 & 21	Review of Math 120 Material
2	1/26 & 28	Review of Math 120 Material, **Exam #1 Thursday Jan 28, 2016**
3	2/2 & 4	Complex Numbers & Logs
4	2/9 & 11	Logs and Exponents
5	2/16 & 18	Logs and Exponents, Exam #2
6	2/23 & 25	Word Problems
7	3/1 & 3	Word Problems
8	3/8 & 10	Word Problems, Exam #3
9	3/14 & 19	Spring Break
10	3/22 & 24	Characteristics of Functions
11	3/29 & 31	Characteristics of Functions
12	4/5 & 7	Transforming Functions
13	4/12 & 14	Composite Functions Exam #4
14	4/19 & 21	Inverse Functions
15	4/26 & 28	Piecewise Functions
16	5/3 & 5	Parabolas and Circles (Final Exam Review Friday May 6 9AM-3PM)
17	5/12	**Final Exam: 1:30-3:30 PM Thursday, May 12, 2016 in A125**

THE COURSE: Homework, Quizzes, and Tests: We will cover nearly the entire book. Please note that the book and MML are not perfectly aligned.

- **You must register for MML by Monday, January 25, 2016 and complete each of the 3 Review assignments to a grade of at least 80% by midnight on Wednesday, January 27, 2016 or risk being dropped.**
- Homework will be done in MML. 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.
- Short written quizzes will be given at the beginning of class on most Thursdays and will cover the most recent homework. Quizzes cannot be made up but the 2 lowest scores will be dropped. A calculator and a 3x5 card will be allowed for the quizzes.
- Optional (but highly recommended) Practice Tests will appear in Blackboard Learn as exams approach. The actual exams will be written, closed book and have 21 problems worth 5 points each. A calculator and a 3x5 card will be allowed for the exams.

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 three weeks or 3 consecutive class periods, the student may be dropped from the class.

UNM EMAIL/BLACK BOARD 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.

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered responsible employees. This designation requires that any report made to a faculty member, TA, or GA regarding sexual misconduct or gender discrimination must be reported to the Office of Equal Opportunity and the Title IX Coordinator. For more information on the campus policy regarding sexual misconduct, see: https://policy.unm.edu/university-policies/2000/2740.html

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. The Equal Access Office can be reached at 925-8510.

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.

UNM's Policy on Academic Honesty: 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.

STUDENT LEARNING OUTCOMES:
Upon successful completion of Course Goal #1 (Communication), students will be able to
- Use proper mathematical notation and terminology to communicate mathematical phrases.
- Read a mathematical text and reproduce its main ideas.
- Verbalize the steps to solve a problem.
- Read and interpret graphs.
- Demonstrate the proper use of interval and set builder notations to express answers to inequalities.

Upon successful completion of Course Goal #2 (Solve Various Kinds of Equations), students will be able to
- Solve linear equations and systems of two linear equations.
- Solve polynomial equations including quadratics and factorable higher order equations.
- Solve rational equations by identifying least common multiple for simplification of the equation and by identifying extraneous solutions to the original equation.
- Solve radical equations using the inverse properties of exponents.
- Solve exponential and logarithmic equations using the properties of exponents and logarithms.
- Identify the standard and general form of the equation of a circle and from this identify the center and radius of the circle.

Upon successful completion of Course Goal #3 (Working with Functions), students will be able to
- Identify the domain and range for a given function.
- Find the function value for a given domain value.
- Determine the domain values for given function values.
- Use basic operations of addition, subtraction, multiplication and division with given functions.
- Create a composite function given two or more functions and decompose a given function into its basic parts.
- Identify and categorize functions according to the general properties of the families of functions. (Students will be able to recognize whether the given function is from the polynomial, rational, radical, exponential or logarithmic family.)

Upon successful completion of Course Goal #4 (Working with Graphs), students will be able to
- Identify whether a graph represents a function.
- Graph a circle given either the standard or general form of the equation of the circle by determining the center and radius of the circle.
- Graph given functions by identifying the following features: domain and range, x- and y-intercepts if they exist, end behavior, asymptotes if they exist, intervals where the function is increasing or decreasing, local maxima and minima.
- Determine the properties (the domain and range, intercepts, end behavior, asymptotes and specific values of the function) & behavior of a function given only the function's graph.

Upon successful completion of Course Goal #5 (Algebra Competencies), students will be able to
- Identify slope as a rate-of-change within the context a given word problem, expressing in their own words what the slope represents for the specific situation.
- Construct appropriate equations to model a situation presented to them through a word problem.
- Extract information from a word problem in such a way that allows them to identify the general behavior of the data through graphing.
- Find maximum and minimum values for word problems modeled by quadratic equations.
- Identify the family of functions that is being illustrated within an applied problem, either by representing the situation by a graph or using their understanding of how certain phenomena behave. (For example, constant rate-of-change will be a linear function, free-falling objects use a quadratic model and compound interest grows exponentially.)