

# Dual Credit College Algebra

## Math 121

Mychael Smith, PhD

### Instructor Information

Academics 142-A

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### Office Hours

TW 9:00AM to 12:00PM

In STEM: W 12:00PM to 1:00PM

Or by appointment

## 1 Overview

Welcome to Math 121. Here is the 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.

## 2 Course Learning Outcomes

1. Understand the concept of a function
  - (a) Apply the definition of a function.
  - (b) Identify domain and range. Interpret in context when appropriate.
  - (c) Use function notation to evaluate functions.
2. Build New Functions from Existing Functions.
  - (a) Use graphing transformations.
  - (b) Use function arithmetic.
  - (c) Find inverse functions.
3. Build and Analyze Graphs.
  - (a) Understand the relationship between a function's equation, table and graph.
  - (b) Identify or sketch the following key features of a graph: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; slope; vertex; and end behavior.
  - (c) Create graphs using key features.

- (d) Write the equation of a function or circle given its graph based on the key features shown (reverse of above outcome).
  - (e) Interpret key features of functions in context.
4. Apply Algebraic Techniques.
- (a) Evaluate numeric expressions in exact form and find decimal approximations for irrational numbers.
  - (b) Solve equations and inequalities.
  - (c) Simplify algebraic expressions to analyze functions and graphs.

### 3 Required Materians

We will be using MyMathLab. You do **not** need a new access code. The courseid is **smith71443**. The material will be taken from the book, College Algebra with Intermediate Algebra, by Beecher, et. al. MML grants you access to an electronic copy of the book.

### 4 Course Structure

Every week, you will have an assignment on MyMathLab and a handwritten “reading assignment.” The purpose of the reading assignments is to ensure you get practice on the topics required for the college portion of the class.

\*Note: If you get a MyMathLab Problem correct, but MyMathLab doesn’t give credit for it due to formatting, you can email me and I can give you credit for the problem.

### 5 Schedule

Week number	Sections Covered in Text	Assignments Due
1	R.4,R.5,R.6	N/A
2	1.1-1.5	Reading 1, MML 1
3	2.6,2.7,3.1-3.4	Reading 2, MML 2
4	4.3-4.8	Reading 3, MML 3
5	7.1-7.5	Reading 4,MML 4
6	2.1-2.4,6.8	Reading 5, MML 5
7	5.1-5.4 (Review from 120) Distance Formula, 11.2 (only circles)	Review for midterm
8	Midterm Review and Midterm	Midterm
9	Spring Break	N/A
10	9.1-9.3	Reading 6, MML 6
11	9.4,9.5	Reading 7, MML 7
12	9.6,9.7	Reading 8, MML 8
13	5.3-5.5	Reading 9, MML 9
14	6.1-6.3 (Review from 120) 6.4-6.7	Reading 10, MML 10
15	8.1-8.6	N/A
16	Review for Final	Study for exam
17	Final Exam	Final

## 6 Grading Policy

Your grades will be based on a combination of your high school work and the work I give you. The reading questions are for me to see that you are trying to read and learn, and the MML homeworks are to check your progress. **I will only be checking the reading assignments for effort and completion.** I will also give out a midterm and final exam. Before you take these I will give your teacher review exams to help you study. Your grade will be calculated as follows.

Requirement	Points
1. Reading Questions	100
2. High School	150
3. MML	100
4. Midterm	100
5. Final Exam	200
Total	650

Your letter grade will be calculated as follows:

Point Total	Grade
[637,650]	A+
[598, 637)	A
[585,598)	A-
[572,585)	B+
[533,572)	B
[520,533)	B-
[507,520)	C+
[455,507)	C
[442,455)	D+
[403,442)	D
[390,403)	D-
[0,390)	F

## 7 Make-up Policy

I will allow up to four late submissions of homework assignments. No explanation is needed. You will just have to email me and ask.

## 8 A note on academic integrity

We will follow university policy and on academic integrity.

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy: <https://policy.unm.edu/regents-policies/section-4/4-8.html>. The policy states:

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, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student 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 is defined as: "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; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

## **9 Students with Disabilities**

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.

## **10 EQUAL OPPORTUNITY AND NON-DISCRIMINATION:**

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education (see page 15 - <http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf>). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity ([oeo.unm.edu](http://oeo.unm.edu)). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>.

## **11 Citizenship and/or Immigration Status:**

All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community. The Administration's welcome is found on our website: <http://undocumented.unm.edu/>.

\*Note: This syllabus is subject to change.