

SYLLABUS
Math 120: Intermediate Algebra – Dual Credit
Fall 2015

Instructor: Elaine Clark **Office:** Academic Bldg. Room 142A

Office Hours:

Face-to-Face at Valencia Campus: Tuesday 2:30 to 4:15 PM, Thursday 4:30 to 5:45 PM. **STEM Center:** Tuesday 1:30 to 2:30 PM

Online: Monday 10:30 AM to 1:00 PM and Thursday 4:30 to 5:30 PM and by appointment. They will occur at <https://meeting.unm.edu/ewclarkonline/> . I can be available on Fridays, in the evenings, and sometimes on Sundays for online office hours but you will need to schedule ahead for these.

Other hours by appointment.

Phone: 925-8618 (my office), 925-8600 (Academic office)

email: ewclark@unm.edu or send a message in Blackboard Learn. I will check email Monday through Friday afternoon unless I am out of town. Expect a response within 24 hours to email messages sent Sunday afternoon through Thursday evening. If you send me a message on Friday afternoon through Sunday I will may not see it until Monday.

Prerequisite: Placement score for Math 120 on the Compass Test or appropriate ACT score. Must also have required high school GPA.

Required Materials:

- You will be using the textbook *Intermediate and College Algebra*, CNM Custom Edition.
- You will also need access to the MyMathTest computer program. You will be assigned quizzes/tests out of the MyMathTest program. These tests come out of the Math 120 curriculum and you will see several questions like these on the final exam for this course. If you do not score well on a test, a Study Plan will be created for you. Be sure to work the Study Plan questions before attempting the test a second time.
- You will be assigned projects and mini-projects to complete for this course. They are posted in Blackboard Learn, so you will need Learn access. These are designed to “fill in” any of the Math 120 course content not covered in MyMathTest or the text. They also provide some applications showing where this type of algebra might be useful.
- You will need Internet access.

Calculator and Other Materials: You may use a graphing or scientific calculator for the assignments in this course. You will need a pencil with a good eraser. It is not a good idea to get in the habit of doing mathematics in ink.

Course Objectives: You will explore linear functions, linear equations, using lines to model data, making predictions, systems of linear equations, inequalities, polynomials and factoring, rational functions, radical functions, quadratic functions, and an introduction to exponential and logarithmic expressions and functions.

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, exponential and logarithmic functions.
2. Find equations of linear models and model data using lines.
3. Solve systems of two linear equations, use graphs and tables to solve systems, and use systems to model data.
4. Factor polynomials.
5. Solve quadratic equations using factoring, quadratic formula, and the square root property.
6. Solve equations containing rational expressions.
7. Solve radical equations.
8. Correctly use function notation and vocabulary related to functions.

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. Communicate or present mathematical concepts in writing and/or orally.
5. Construct application problems.
6. Actively and effectively work in groups to engage in mathematical problem solving.

Support: If you are struggling in this course, do not be afraid to ask for help! It is a well known fact that in order to succeed in a college-level course, you will need to spend two to three hours outside of class on coursework for every hour spent in class. This means you should set aside 8 hours outside of class EACH WEEK to work on assignments.

- **Free Tutoring:** The UNM-Valencia Learning Center has free tutoring and open labs. Call 505-925-8900 for more information and tutoring appointments. They do have an online meeting room for online tutoring.
- **Office Hours:** Feel free to contact me or make an appointment. If you cannot come to Valencia campus, I can meet you online.
- **Ask My Instructor:** In the MyMathTest program there is a button you can click on to send me an email with your question. The email will include a link to the specific question you are struggling with. This button is only available when you are in the study plan working on practice questions.

Grade: There are six components that make up your overall course grade:

Homework Assignments from your High School Teacher	15%
Chapter/Unit Tests & Quizzes given by your HS Teacher	15%
Quizzes/Tests in MyMathTest	15%
MiniProjects and Projects posted in UNMLearn	15%
Midterm Exam	10%
Final Departmental Exam*	30%

- Full credit on assignments means you have turned in complete, correct work *on time*. Assignments that are not complete, correct, or on time will lose points or may not be accepted.
- Letter grades are determined by a weighted course average as described above, however ***you will also need to score at least a 70% on the final exam to be assigned a passing grade for the course.***

Grades will be assigned at the end of the semester as follows:

- A 90% weighted average or more
 - B between 80% and 89% weighted average
 - C between 70% and 79% weighted average
 - D between 50% and 69% weighted average
OR a weighted average above 70% but scored less than 70% on the final exam
 - F below 50% weighted average
- Plus or minus may be added to a letter grade if you are very close to a cut-off percent, though I do not assign grades of C-. A grade of C- or lower is not considered a passing grade for this course.

MyMathTest: You will need Internet access in order to complete the tests posted in MyMathTest (MMT). I will not accept handwritten work for the tests. ***You should attempt to score an 80% on each test.*** This means, don't just take it once and move on, unless you have achieved 80% mastery. If you do not score 80%, the program will generate a Study Plan for you which allows extra practice. Be sure to review your test and complete the Study Plan questions before retaking the test.

If you have not completed (scored an 80%) the first two quizzes by September 2, you will be dropped from the course.

You are allowed up to three extensions on these tests and no more. This should account for illness, computer issues, and so forth. Also, you are allowed 3 attempts on each test to achieve the 80% mastery score.

Other Important Information:

- Equal Access: 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 your accommodations are provided in a timely manner. It is up to you to obtain documentation of a disability by contacting Equal Access Services. I will not guarantee accommodation without the appropriate documentation.
- Academic Dishonesty: Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. 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.

- Copying from the Internet: I have no problem with you consulting the Internet for answers, but be sure those answers actually apply to the question you've been asked. Also, don't just copy down answers given you by an Internet website; it won't be there for you to consult on the final exam.

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Preliminary Schedule (Subject to change as needed)

WK	Topic(s) Sections in Text	Tests to Complete in MyMathTest	Projects/Mini-Projects Notes
8/17 1	Basic Concepts, Operations on Real Numbers Sect. A 1.1, 1.2	Orientation; Register in MMT; Prof. Clark visit this week Test 1 - final due date 8/25 In Study Plan look at sections: R2.1, R2.3, R2.4, R2.5, R2.6, R2.7	How to use Graphing Calc Exact vs. Approx. Answers Make it your goal to score at least an 80% on each test in MyMathTest
8/24 2	Exponents, Roots, Order of Operations, Properties of Real Numbers, Evaluating Exp. Vs. Solve Eqs. Sect. A 1.3, 1.4, 2.1	Test 2 - final due date 9/1 In Study Plan look at sections: R2.1, R2.2, R2.6, R2.8, R8.1	Expressions vs. Equations Mini-Project 1 due 8/28 Must pass Tests 1 and 2 with 80% by midnight Wednesday, 9/2 or risk being dropped
8/31 3	Formulas, Application of Linear Equations, Linear Inequalities Sect. A 2.2, 2.3, 2.5	Test 3 - final due date 9/8 In Study Plan look at sections: R1.2, R1.5, R1.6, R3.1, R3.3, R3.4 R3.5, R3.6, R3.7	Review of Geometry Formulas, Linear Inequalities Mini-Project 2 due 9/4
Labor Day Holiday - Monday, September 7 (both UNM and SHS)			
9/8 4	Rectangular Coord. System, Slope of a Line, Parallel and Perpendicular Sect. A 3.1, 3.2	Test 4 - final due date 9/15 In Study Plan look at sections: R4.1, R4.2, R4.3, R4.4, R4.7, 1.1, 1.2	Relate Line Graphs With Line Equations etc. Mini-Project 3 due 9/11
9/14 5	Linear Equations, Systems of Linear Equations, Appl. Sect. A 3.3, 4.1, 4.3	Test 5 - final due date 9/22 In Study Plan look at sections: 1.2, 1.3, 8.1	Applications of Systems of Linear Equations Project 4 due 9/18
9/21 6	Intro to Functions, Domain, Range, Notation, Evaluate, Exponent Rules, Scientific Notation Sect. A 3.5, 5.1	Test 6 - final due date 9/29 In Study Plan look at sections: R4.6, R5.2, R5.5, R5.8, R9.5, 2.1	Function Notation, Scientific Notation Mini-Project 5 due 9/25
9/28 7	Adding/Subtracting/ Multiplying Polynomials Sect. A 5.2, 5.4	Test 7 - final due date 10/6 In Study Plan look at sections: R5.1, R5.3, R5.4, 2.1	Operations on Polynomials Mini-Project 6 due 10/2
10/5 8	Review for Midterm Take Midterm	Take Midterm Exam by Friday 10/9	Work on Practice Problems for Midterm
UNM Fall Break 10/8 and 10/9			
10/13 9	Factoring Polynomials Sect. A 6.1, 6.2	Test 8 - final due date 10/20 In Study Plan look at sections: R6.1, R6.2, R6.3, R6.4	Factoring Trinomials Mini-Project 7 due 10/16

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WK	Topic(s) Sections in Text	Tests to Complete in MyMathTest	Projects/Mini-Projects Notes
10/19 10	Factoring Polynomials, Solving Polynomial Equations Sect. A 6.3, 6.4, 6.5	Test 9 - final due date 10/27 In Study Plan look at sections: R6.5, R6.6, R6.7	Solving by Factoring Mini-Project 8 due 10/23
10/26 11	Solving Quadratics Sect. A 9.1, 9.2	Test 10 - final due date 11/3 In Study Plan look at sections: R9.1, R9.3	Applications with Quadratics Mini-Project 9 due 10/30
11/2 12	Formulas, Applications Graphing Parabolas Sect. A 9.4, 10.2	Test 11 - final due date 11/10 In Study Plan look at sections: R9.4, R9.5, R9.9	Graphs of Quadratics Project 10 due 11/6
11/9 13	Rational Expressions Sect. A 7.1, 7.2, 7.3	Test 12 - final due date 11/17 In Study Plan look at sections: R7.1, R7.2, R7.3, R7.4, R7.6, R7.7	Simplifying Rational Expressions Mini-Project 11 due 11/13
11/16 14	Roots and Radicals, Radical Expressions Sect. A 8.1, 8.2, 8.3	Test 13 - final due date 11/24 In Study Plan look at sections: R8.1,R8.2,R8.3,R8.4,R8.6,R8.7,R8.9	Simplifying Radical Expressions Mini-Project 12 due 11/20
11/23 11/30 15/16	Intro to Exponential Functions Sect. B 4.2	Test 14 - final due date 12/2 In Study Plan look at sections: 4.1, 4.2, 4.4	Exponential Functions and Their Graphs
Week of 11/30		Review for Final	
Week of 12/7		Take Final Exam by Thursday, Dec. 10	