

UNM Valencia
MATH 1215-552, Intermediate Algebra
Fall 2022

Instructor: Michael Gonzales

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Office: LRC 107

Tutoring Hours: Tuesdays: 1030-1130, 1330-1500, Wednesdays: 1000-1130 Thursdays: 1050-1150, or by appointment

Class time and location:

MECS Division Chair: Ariel Ramirez (aramirez8@unm.edu)

Text: *Developmental Mathematics*, 2nd edition, by Sullivan, Struve, Mazzarella.

Course description: This course is a study of linear and quadratics functions, an introduction to polynomial, absolute value, rational, radical, exponential, and logarithmic functions. Development of strategies for solving single variable equations and contextual problems. (3 Credit Hours).

Prerequisites: Appropriate placement score or a grade of C or better in Math 100 or Math 022 or FYEX 1010 or ISM 100 or ACT Math ≥ 18 or SAT Math Section ≥ 490 or ACCUPLACER Next-Generation Advanced Algebra and Functions ≥ 228 , or QRAS ≥ 248 , or Arithmetic ≥ 285 . Check with your adviser to make sure you meet the requirements.

Course Outcomes: In this course, we will explore linear functions, systems of linear equations, linear inequalities, polynomials and factoring, rational functions, and radical functions, and we will introduce exponential and logarithmic functions. A complete list of the Student Learning Objectives for this course is given at the end of this syllabus.

Other Requirements:

- Reliable access to a computer or tablet, and Internet. A computer (laptop or desktop) is recommended. Preferred browsers are Chrome, Firefox, or Safari. The preferred operating systems are Windows or Apple.
- Access to UNM Learn requires use your UNM NetID to log into UNM Learn. You may access it directly via <https://canvas.unm.edu/>
- Standard or Scientific calculator. It cannot be an app on your cell phone.
- Adobe Reader (a free download), preferably version 11.0 or better.

Attendance/Participation (5%): You are expected to be on time for each class, stay the entire class, have the necessary course materials on hand, and participate in the lecture or group activities to receive full credit for attendance each day.

- **Absences:** If you know ahead of time you will miss class, send me an email with the date of the absence to receive an excused absence. Arrange before the next class to get notes from a classmate. The student is responsible for the material and information covered in class.

High School Assignments Homework (15%): Homework and assignments from high school will be contributing to this portion of the grade for the class.

Written Homework(20%): Problems assigned are listed on the schedule at the end of the syllabus and the problems will be found in the e-text in MML. These written assignments must be

completed and turned in by the due date listed on the schedule for full credit. Each written homework assignment is worth 10 points. A 10% penalty will be incurred if your homework is more than a week late.

Projects (20%): During the semester, projects will be assigned in each unit. You are encouraged to work with classmates on the project assignments. If working with a group, I require individual submissions of the project, not one group paper. The point value for each project is provided with the assignment. These project assignments must be completed and turned in by the due date listed on the schedule for full credit. A 10% penalty will be incurred if your project is more than a week late.

Exams (20%): There will be two written exams during the semester. These will correspond to the final exams for Math 1215X and Math 1215Y, respectively. Each exam is worth 100 points. If you are ill or an unexpected event happens preventing you from taking the exam, you have one week to make it up.

Final Exam (20%): The final is a departmental exam that will test all, or nearly all, of the learning objectives for this course. The final exam must be taken during the week scheduled. You are allowed to take the final only once.

Grading: Course Averages: Attendance/Participation 5%, High School Assignments Homework 15%, Written Homework 20%, Projects (13) 20%, Term Exam (2) 20%, Cumulative Final Exam* 20%. Total: 100%

***You must score at least a 70% on the final exam and have a course average of 70% or better to earn a passing grade in the course.**

Grading Scale:

Letter Grade	Final Exam Score AND Course Weighted Average
A	70% or better AND 90% or better
B	70% or better AND 80% to 89%
C	70% or better AND 70% to 79%
CR	70% or better AND 70% or better
NC	Less than 70% AND any course grade

In the case where a student is unsuccessful in the course, if a grade is required for financial aid, please inform the professor.

Expectations:

- Students are expected to conduct themselves in a polite, courteous, professional, and collegial manner. When participating in discussions or interacting with me or other students be respectful at all times
- **Time for This Course:** Plan to spend a minimum of 9 to 12 hours per week for this class. There is no guarantee you will pass if you dedicate this amount of time, you still need to learn the material and use your time wisely, but those who pass generally are the ones who spend the time needed to do the work to learn the material.

Support:

- Form study groups: You may work together with other members of our class.
- Free Tutoring: The Math Center at Valencia campus has free tutoring and open labs. Call 505-925-8907 for more information. CAPS on main campus also provides tutoring for which I can get documentation.

- Student Services: There are various services provided in our Student Services Department. See below about equal access. Also, we have a testing center, advising, and career placement available: Valencia Student Services
- Work will be graded and returned with feedback within one week of submission. You are encouraged to do corrections and resubmit any written homework or project assignments to improve your grade up to two weeks after the due date.

Instructor Response Time: I routinely check the course for postings or emails, Monday (7 am) – Friday (noon), and sometimes on the weekend. You can anticipate a 24 to 48-hour response from me, Monday – Thursday. I will try and respond to all weekend (Friday afternoon to Sunday) emails and postings by noon on Monday or earlier. I prefer all communication through email or Canvas Learn.

Other Important Information:

Equal Access: In accordance with University Policy 2310 and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that you take the initiative to bring such needs to the instructor’s attention, as I am not legally permitted to inquire. Students who may require assistance in emergency evacuations should contact the instructor as to the most appropriate procedures to follow. Contact Accessibility Resource Center at 277-3506 for additional information.

If you need an accommodation based on how course requirement interacts with the impact of a disability, you should contact me to arrange an appointment as soon as possible. At the appointment, we can discuss the course format and requirements, anticipate the need for adjustments and explore potential accommodations. I rely on the Disability Services Office for assistance in developing strategies and verifying accommodation needs. If you have not previously contacted them, I encourage you to do so.

If you are a Valencia campus student, contact Equal Access Services at Valencia Campus, Cheryl Dilger at (505) 925-8910 or Valencia Student Services. If you are a main campus student, you can receive documentation from the main campus Accessibility Resource Center. I will not guarantee accommodation without the appropriate documentation.

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:

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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.

Title IX Statement: 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 pg. 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). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>

COVID-19 Health and Awareness: UNM is a mask friendly, but not a mask required, community. To be registered or employed at UNM, Students, faculty, and staff must all meet UNM's Administrative Mandate on Required COVID-19 vaccination. If you are experiencing COVID-19 symptoms, please do not come to class. If you have a positive COVID-19 test, please stay home for five days and isolate yourself from others, per the Centers for Disease Control (CDC) guidelines. If you do need to stay home, please communicate with me at [mgonza79@unm.edu]; I can work with you to provide alternatives for course participation and completion. UNM faculty and staff know that these are challenging times. Please let us know that you need support so that we can connect you to the right resources and please be aware that UNM will publish information on websites and email about any changes to our public health status and community response.
Support:

- Student Health and Counseling (SHAC) at (505) 277-3136. If you are having active respiratory symptoms (e.g., fever, cough, sore throat, etc.) AND need testing for COVID- 19; OR If you recently tested positive and may need oral treatment, call SHAC.
- LoboRESPECT Advocacy Center (505) 277-2911 can offer help with contacting faculty and managing challenges that impact your UNM experience

Communications on Change in Modality: The university may direct that classes move to remote delivery at any time to preserve the health and safety of the students, instructor and community. Please check your email and your UNM Learn site regularly for updates about our class, and please check <https://bringbackthepack.unm.edu> regularly for general UNM updates about COVID-19 and the health of our community. If this occurs, there will be no in person office hours.

For Military-Connected Students: There are resources on campus designed to help you succeed. You can approach any faculty or staff for help with any issues you may encounter. Many faculty and staff have completed the GREEN ZONE training to learn about the unique challenges facing military-connected students. If you feel that you need help beyond what faculty and/or staff can give you, please reach out to the Veterans Resource Center on main campus at 505-277-3181, or by email at vrc@unm.edu. The Veterans Coordinator at UNM-Valencia is in the Student Services Office, at 505-925-8560.

Semester Dates and Deadlines:

- Fall 2022– 16-week classes (deadlines will be different for first and second 8-week classes)
- Monday, August 22: First day of class, classes available in Canvas
- Monday, September 5: Labor Day, no class
- Friday, September 2, by 5:00 pm: Last day to add a class or to change credit hours or grade mode in LoboWEB.
- Friday, September 9: Last day to drop without "W" grade and with 100% refund on LoboWEB
- Friday, November 11 : Last day to drop without Dean's permission on LoboWEB. Will receive "W" grade and will be responsible for tuition for the course.
- Friday, December 9: Last day to drop with the permission form.
- Finals Week: Monday, December 12 – Saturday, December 17

MATH 1215 Course Student Learning Outcomes: Upon successful completion of the course, students will be able to:

1. Demonstrate appropriate use of basic function language and notation.

- a. Communicate or present mathematical concepts using correct mathematical notation and terminology
- b. Correctly use function notation and vocabulary related to functions.
- c. Determine function values for given domain values and determine domain values for given function values.
- d. Determine domains for specific functions.
2. Convert between equivalent forms of algebraic expressions.
 - a. Simplify expressions using properties of exponents.
 - b. Add, subtract, and multiply polynomials.
 - c. Rewrite line equations in different forms (slope-intercept, point-slope, standard)
 - d. Factor some types of polynomials.
 - e. Simplify radical expressions
 - f. Simplify rational expressions.
 - g. Rewrite exponential functions in logarithmic form and vice versa.
3. Solve single-variable equations of the types listed above.
 - a. Solve for a single variable in a proportion.
 - b. Solve for a single variable in a linear equation.
 - c. Solve for a specified variable in a formula.
 - d. Solve quadratic equations using factoring, quadratic formula, and the square root method.
 - e. Solve equations containing rational expressions.
 - f. Solve equations containing radical expressions.
 - g. Solve absolute value equations in one variable.
 - h. Solve exponential and logarithmic equations using equating bases.
4. Interpret and communicate algebraic solutions graphically and numerically.
 - a. Determine equations for lines in the three forms – slope-intercept and point-slope.
 - b. Sketch the graphs of linear functions.
 - c. Interpret slope in relation to variable coefficients and as a rate of change.
 - d. Graph linear inequalities in one variable on a number line and write corresponding interval notation.
 - e. Determine when linear equations represent parallel and perpendicular lines.
 - f. Sketch graphs of quadratic functions.
5. Demonstrate contextual problem-solving skills that include setting up and solving problems and interpreting solutions in context.
 - a. Determine linear equations from application problems and solve.
 - b. Set up a linear proportion from an application problem and solve.
 - c. Analyze solutions to application problems and give them contextual meaning.
 - d. Determine the three types of outcomes from a system of linear equations in the context of what the graphs look like (terminology about consistent/inconsistent or dependent/independent not emphasized).
 - e. 5. Determine a system of linear equations from an application problem and solve if possible.
6. Apply appropriate problem-solving methods from among algebraic, graphical, and numerical.
 - a. Perform unit conversions.
 - b. Solve linear inequalities in one variable.
 - c. Simplify expressions written in scientific notation.
 - d. Simplify multiplication and division problems using scientific notation.
 - e. Apply solution methods learned to application problems.
 - g. Solve systems of two linear equations graphically and algebraically.
 - h. Solve problems including percent.
 - i. Perform operations with radical expressions.
 - j. Perform operations with rational expressions.
 - k. Solve absolute value inequalities in one variable.

Tentative Schedule

Week	Dates	Sections/Topics	Assignments Due
1	08/22-08/28	Unit 1: 8.3 and 8.4	
2	08/29-09/04	Unit 2: Sects. 8.8 and 8.6	Sect. 8.3: #105, #113 (pg. 556, 557), Sect. 8.4: #55,#73,#83 (pg.566, 567), Project 1
3	09/06-09/11	Unit 3: Sects. 9.1, 9.2, 9.3,9.4,9.5	Sect. 8.6: #43, #54 (pg. 586, 587), Sect. 8.8: #91, #119, (pg.608, 609), Project 2
4	09/12-09/18	Unit 4: Sects. 9.6, 10.1, 9.3,9.4,9.5	Sect. 9.1: #65 a-d,(pg. 630) Sect. 9.2 #123 (pg. 644), Sect. 9.4: #95 a and b, (pg.663), Sect 9.5: #71, (pg. 671) Project 3
5	09/19-09/25	Unit 5: Sects. 10.2, 10.3,	Sect. 9.6: #71, #87 (pg. 679), Sect. 10.1: #71, #89, (pg.708, 709), Project 4
6	09/26-10/02	Midterm 1	Sect. 10.2: #53, #56 (pg. 716, 717), Sect. 10.3: #69, #71, (pg.725), Project 5
7	10/03-10/09	Unit 6: Sects. 11.1, 11.2, 11.3,11.4,11.6	
8	10/10-10/16	Unit 7: Sects. 12.1, 12.2, 12.3	Sect. 11.1: #121 (pg. 767), Sect. 11.2: #79 (pg.772), Sect. 11.3: #139 (pg. 783) Sect. 11.4: #105 (pg. 795) Sect.11.6: #92 (pg. 809) Project 6
9	10/17-10/23	Unit 8: Sects. 14.1, 14.2, 14.3,14.4	Sect. 12.1: #87 (pg. 826), Sect. 12.2: #94, #95, (pg.835), Sect.12.3 #75, #77 (pg. 845) Project 7

Week	Dates	Sections/Topics	Assignments Due
10	10/24-10/30	Unit 9: Sects. 15.1, 12.6 16.2, 16.5	Sect. 14.1: #66 (pg. 981), Sect. 14.2: #55 (pg.987), Sect. 14.3: #55, #57 (pg. 997) Sect. 14.4: #37 (pg. 1007) Project 8
11	10/31-11/06	Midterm 2	Sect. 15.1: #75 (pg. 1070), Sect. 12.6: #79 (pg.866), Sect. 16.2: #87 (pg. 1164) Sect. 16.5: #75 (pg. 1198) Project 9
12	11/07-11/20	Unit 10: Sects. 13.1, 13.2, 13.3	
13	11/14-11/20	Unit 11: Sects. 13.5,13.7,14.7	Sect. 13.1: #91 (pg. 890), Sect. 13.2: #79 (pg.898), Sect. 13.3: #87 (pg. 905) Project 10
14	11/21-11/27	Unit 12: Sects. 15.2, 15.3, 15.4, 15.8	Sect. 13.5: #87 (pg. 922), Sect. 13.7: #41,#43 (pg.941), Sect. 14.7: #91 (pg. 1043) Project 11
15	11/28-12/04	Unit 13: Sects. 17.2, 17.3	Sect. 15.2: #141 (pg. 1078), Sect. 15.3: #35 (pg.1083), Sect. 15.4: #137 (pg. 1092) Sect. 15.8: #99 (pg. 1119) Project 12
16	12/05-12-11	Final Review	Sect. 17.2: #93 (pg. 1254), Sect. 17.3: #125 (pg.1267), Project 13
	12/12-12/19	Final Exams Week	December 12-December 14