



Course: Math 1215-550 Dual Credit CRN 68105

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3 Credit hours

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COURSE DESCRIPTION

This course studies 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).

Course Goals:

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.

Student Learning Outcomes/Course Objectives

The following are the objectives for the course. Each module/week/unit will have specific learning objectives listed on the Overview Page. The activities in that module (i.e., discussions, assignments, and assessments) are developed so that you can demonstrate you have met these objectives:

Upon successful completion of the course, students will be able to:

- A. Demonstrate appropriate use of basic function language and notation.
 1. Communicate or present mathematical concepts using correct mathematical notation and terminology.
 2. Correctly use function notation and vocabulary related to functions.
 3. Determine function values for given domain values and determine domain values for given function values.
 4. Determine domains for specific functions.
- B. Convert between equivalent forms of algebraic expressions.
 1. Simplify expressions using properties of exponents.
 2. Add, subtract, and multiply polynomials.
 3. Rewrite line equations in different forms (slope-intercept, point-slope, standard)
 4. Factor some types of polynomials.
 5. Simplify radical expressions.
 6. Simplify rational expressions.
 7. Rewrite exponential functions in logarithmic form and vice versa.
- C. Solve single-variable equations of the types listed above.
 1. Solve for a single variable in a linear equation.
 2. Solve for a specified variable in a formula.
 3. Solve quadratic equations using factoring, quadratic formula, and the square root method.
 4. Solve equations containing rational expressions.
 5. Solve equations containing radical expressions.
 6. Solve absolute value equations in one variable.
 7. Solve exponential and logarithmic equations using equating bases.
- D. Interpret and communicate algebraic solutions graphically and numerically.
 1. Determine equations for lines in the three forms – slope-intercept and point-slope.
 2. Sketch the graphs of linear functions.
 3. Interpret slope in relation to variable coefficients and as a rate of change.
 4. Graph linear inequalities in one variable on a number line and write corresponding interval notation.
 5. Determine when linear equations represent parallel and perpendicular lines.
 6. Sketch graphs of quadratic functions.

- E. Demonstrate contextual problem-solving skills that include setting up and solving problems and interpreting solutions in context.
1. Determine linear equations from application problems and solve them.
 2. Set up a linear proportion from an application problem and solve it.
 3. Analyze solutions to application problems and give them contextual meaning.
 4. 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)
 5. Determine a system of linear equations from an application problem and solve if possible.
- F. Apply appropriate problem-solving methods from among algebraic, graphical, and numerical.
1. Perform unit conversions.
 2. Solve linear inequalities in one variable.
 3. Simplify expressions written in scientific notation.
 4. Simplify multiplication and division problems using scientific notation.
 5. Apply solution methods learned to application problems.
 6. Solve systems of two linear equations graphically and algebraically.
 7. Solve problems including percent
 8. Perform operations with radical expressions.
 9. Perform operations with rational expressions.
 10. Solve absolute value inequalities in one variable.

Completing Math 1215 meets the prerequisites for Math 1130, Math 1350, Math 1220, and some science classes.

Prerequisites and Co-requisites

Appropriate placement score or a grade of C or better in Math 100 or Math 022 or ACT Math \Rightarrow 18 or SAT Math Section \Rightarrow 490 or ACCUPLACER Next-Generation Advanced Algebra and Functions \Rightarrow 228, or QRAS \Rightarrow 248, or Arithmetic \Rightarrow 285 or B+ in Alg II or B- or B in Statistics or CRM or C or lower in Pre-calculus, Trigonometry, Calculus. Check with your adviser to make sure you meet the requirements.

TECHNICAL SKILLS

To participate and succeed in this class, you will need to be able to perform the following basic technical tasks:

- Use UNM Learn (help documentation located in the "How to Use Learn" link on the left course menu and at [Online Student Documentation](#)). Also, UNM-Valencia provides a Blackboard Learn Jumpstart self-learning module to give you practice with the most commonly used tools in UNM Learn. Ask your instructor if you do not see the UNM-Valencia Blackboard Learn Jumpstart in your list of classes in UNM Learn.
- Use email – including attaching files, opening files, downloading attachments
- Copy and paste within applications including Microsoft Office
- Open a hyperlink (click on a hyperlink to access a website or online resource)
- Use Microsoft Office applications
 - Create, download, update, save and upload MS Word documents
 - Download, annotate, save and upload PDF files
 - Access MS Teams

- Use the in-course web conferencing tool (Collaborate Web Conferencing software in UNM Learn) or use Zoom or another web conferencing tool
- Download and install an application or plugin – required for participating in web conferencing sessions

TECHNICAL REQUIREMENTS

Computer

- A high-speed Internet connection is highly recommended.
- Supported browsers include: [Detailed Supported Browsers and Operating Systems](#)
- Any computer capable of running a recently updated web browser should be sufficient to access your online course. However, remember that processor speed, RAM, and Internet connection speed can *significantly* affect performance. **Some programs that use mathematics will not work well on mobile devices such as smartphones or tablets.**
- Microsoft Office products are available free for all UNM students (more information on the [UNM IT Software Distribution and Downloads page](#))
- Please update your contact information in LoboWeb: [MyUNM Login](#). When you log into MyUNM, Enter LoboWeb. Click on the Personal Information link to make sure your contact information is up to date.
- Laptops may be available for checkout for the Fall semester from the [UNM-Valencia Library](#). Contact the librarians for more information.

Web Conferencing and Tutoring Hours

Web conferencing via ZOOM will be used for tutoring hours in this course during the following times and dates: T/W/Th 9 am – 10:20 am, W 4:30-6:30 pm, or by appointment. Other hours may be scheduled in the evening if the class requires it.

For the online sessions, you will need:

- A USB headset with a microphone. Headsets are widely available at stores that sell electronics, at the UNM Bookstore, or online.
- A high-speed internet connection is highly recommended for these sessions. A wireless Internet connection may be used if successfully tested for audio quality before web conferencing.
- You should also dress as you would when attending an in-person class, even if you do not turn on your video camera.

Technical Support

- For UNM Learn Technical Support: (505) 277-0857 (24/7) or use the "Create a Tech Support Ticket" link in your course.
- For UNM-Valencia IT Support: (505)925-8911
- For UNM Web Conference Technical Help: (505) 277-0857

TEXTBOOK AND SUPPLEMENTAL MATERIALS

Required Textbooks:

"Developmental Mathematics," 2nd edition, by Sullivan, Struve, Mazzarella.

COURSEWORK AND PARTICIPATION

Instructor Response Time

I routinely check the course for emails, Monday (8 am) – Friday (noon), and sometimes on weekends. 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. If you have not received a response within 48 hours, please contact me again, I may have missed your email.

Expectations for Attendance/Participation

Attendance and participation are 10% of the overall grade. Your high school teacher will maintain records of your attendance and participation.

High School Homework: Your high school teacher will assign additional homework. The high school homework will cover other topics and practice from the sections of this course. 10% of the overall grade comes from these additional assignments.

Written Homework: Each unit will have separate written homework and must be completed as indicated on the outline. The purpose of the written homework is to determine if you understand the concepts correctly. I will not grade illegible homework. Your score on each will be out of **25 points**. Written homework is worth 20% of your overall course grade. **Late homework has a week's grace period and will receive a 10% penalty unless special circumstances exist. Contact me if you believe you have unusual circumstances that should allow you additional time for completion.**

Projects: Projects are required! During the semester, each unit will have a project for a total of thirteen small projects. **You can work with each other on these projects**, but you must submit YOUR work. The projects are worth 20% of your overall course grade. **Late projects have a week's grace period and will receive a 20% penalty.**

Exams: There will be two exams during the semester. You will receive a formula sheet for the exam, and you can use a calculator. You can NOT use your phone for a calculator. The average of the two exams is worth 20% of the overall course grade.

Final Exam: The final exam is a comprehensive departmental exam that will test all, or nearly all, of the learning objectives for this course. You will receive a formula sheet for the final, and you can use a calculator. You are allowed to take the final **only once**. The final exam will be 20% of your overall course grade.

Netiquette

One of the overriding principles in online conversations is to "craft your responses effectively." It is sometimes difficult to remember that real people are reading posted messages. It is especially

true of online communication where others do not have the opportunity to see body language or hear the tone of voice; therefore, misunderstandings are more likely.

Please, follow these guidelines in **all** of your online responses and discussion postings.

- Honor everyone's right to an opinion.
- Respect the right of each person to disagree with others.
- Respond honestly but thoughtfully and respectfully; use language that others will not consider foul or abusive. You may also use emoticons to convey a lighter tone.
- Respect your privacy and the privacy of others by not revealing information that you deem private and which you feel might embarrass you or others
- Be prepared to clarify statements that might be misunderstood or misinterpreted by others.

A Special Note about Anger

- Do not send messages that you have written when you are angry, even anonymous ones. In the online world, angry messages are known as "flaming" and are considered bad behavior. Venting and flaming are two different things. It is possible to vent without becoming "ugly." Stick to the facts of what is causing you frustration.
- Do not send written messages all in upper case; this is the visual equivalent of SHOUTING. It is considered aggressive and is considered bad behavior. If you ever feel like shouting a message, take a deep breath, and wait until you have calmed down before responding. Then, respond calmly and factually.
- [Netiquette document](#)

NOTES TO STUDENTS ABOUT PARTICIPATION IN A COURSE USING UNM LEARN:

Tracking Course Activity

UNM Learn automatically records all students' activities, including your first and last access to the course, the pages you have accessed, the number of discussion messages you have read and sent, web conferencing, discussion text, and posted discussion topics. This data can be accessed by the instructor to evaluate class participation and to identify students having difficulty

Submitting Assignments

When you submit an assignment via UNM Learn, you will receive an email receipt of your submission from *do-not-reply@learn.unm.edu*. Save this email as confirmation of your submission.

GRADING PROCEDURES

- ***Assessments will be graded as soon as possible and scores posted in UNM Learn.***
- ***If instructor comments are needed, PDF copies of relevant assessment pages will be uploaded to individual One-Drive folders in UNM Learn.***

COURSE AVERAGES:

Attendance/Class Participation	10%
High School Homework	10%
Math 1215 Written Homework	20%
Projects	20%
Exams (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

Final grades will be based on the sum of all possible course points, as noted above.
Percentage of available points

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

UNM POLICIES**Equal Opportunity and Non-Discrimination**

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). 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](#).

[Read more about campus policy regarding sexual misconduct.](#)

Copyright Issues

All materials in this course fall under copyright laws and should not be downloaded, distributed, or used by students for any purpose outside this course.

[The UNM Copyright Guide](#) has additional helpful information on this topic.

Accessibility and Accommodations

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodations of their disabilities. If you have a disability requiring an accommodation, please contact:

- [UNM-Valencia Student Services](#) if you are a Valencia campus student. The phone number is 505-925-8560
- [UNM Accessibility Resource Center](#) in 2021 Mesa Vista Hall if you are the main campus student. The phone number is 505-277-3506.

Information about your disability is confidential, and your instructor cannot refer you for accommodations. Be aware that you will need to provide documentation. If you need assistance in obtaining documentation, the offices above can assist you.

Accessibility Statements

[Blackboard's Accessibility statement](#)

[Microsoft's Accessibility statement](#)

Include links to accessibility statements for all other technologies included in the course.

Academic Integrity

You should be familiar with UNM's [Policy on Academic Dishonesty](#) and the [Student Code of Conduct](#) which outlines academic misconduct defined as plagiarism, cheating, fabrication, or facilitating any such act.

Drop Policy:

UNM Policies: This course falls under all UNM policies for the last day to drop courses, etc. Please see or the UNM Course Catalog for information on UNM services and policies. Please see the UNM academic calendar for course dates, the last day to drop courses without penalty, and for financial disenroll dates.

UNM RESOURCES

- [UNM Valencia Campus Tutoring Services](#)
- [UNM Main Campus CAPS Tutoring Services](#)

- [UNM-Valencia Library](#)
- [UNM Libraries](#)
- ["Life" Resources available to UNM-Valencia Students](#)
- [Student Health & Counseling \(SHAC\) Online Services](#)

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 military-connected students' unique challenges. 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 the main campus at 505-277-3181 or email at vinc@unm.edu. The Veterans Coordinator at UNM-Valencia is in the Student Services Office, at 505-925-8560.

Week	Dates	Sections / Topics	Assignment Due Dates: due on Monday or Tuesday dependent on when your class meets
1	8/16 - 8/20	Unit 1: Sections. 8.3, & 8.4	
1	8/23-8/27	Unit 2: Sections 8.6 & 8.8	Written Unit 1 HW & Project 1 due 8/23 or 8/24
2	8/30 - 9/3	Unit 3: Sections. 9.1, & 9.2	
	9/3	Last day to add a course (5 pm)	
3	9/6 - 9/10	Unit 3: Sections. 9.3, 9.4, & 9.5	Written Unit 2 HW & Project 2 due 9/6 or 9/7
	9/10	Last day to drop a course without a grade (5 pm)	
4	9/13 - 9/17	Unit 4: Sections. 9.6, & 10.1 Unit 5: Sections. 10.2, & 10.3	Written Unit 3 HW & Project 3 due 9/13 or 9/14
5	9/20 - 9/24	Review Test # 1	Written Unit 4 HW & Project 4 due 9/20 or 9/21
6	9/27 - 10/01	Unit 6: Sections: 11.1, 11.2, 11.3, & 11.4	Written Unit 5 HW & Project 5 due 9/27 or 9/28
7	10/4 - 10/8	Unit 6: Section: 11.6 Unit 7: Sections. 12.1, 12.2, & 12.3	Written Unit 6 HW & Project 6 due 10/4 or 10/5
8	10/11 - 10/13	Unit 8: Sections: 14.1, & 14.2	Written Unit 7 HW & Project 7 due 10/11 or 10/12
	10/14 - 10/15	Fall Break	
9	10/18 - 10/22	Unit 8: Sections. 14.3, & 14.4 Unit 9: Sections. 15.1, & 12.6	

10	10/25 - 10/29	Unit 9: Sections. 16.2, & 16.5	Written Unit 8 HW & Project 8 due 10/25 or 10/26
11	11/1 - 11/5	Review Test #2	Written Unit 9 HW & Project 9 due 11/1 or 11/2
12	11/8 - 11/12	Unit 10: Sections. 13.1, 13.2, & 13.3 Unit 11: Section. 13.5	
	11/12	Last day to drop without Dean's Permission (5 pm)	
13	11/15 - 11/19	Unit 11: Sections. 13.7, & 14.7 Unit 12: Section. 15.2	Written Unit 10 HW & Project 10 due 11/15-16
14	11/22 - 11/24	Unit 12: Sections. 15.3, & 15.4	Written Unit 11 HW & Project 11 due 11/22-23
	11/25 - 11/26	Thanksgiving Holiday	
15	11/29 - 12/3	Unit 12: Section. 15.8 Unit 13: Section. 17.2	Written Unit 12 HW & Project 12 due 12/01-02
16	12/6 - 12/10	Unit 13: Section. 17.3 Review	Written Unit 13 HW & Project 13 due 12/08-09
	12/10	Last day to drop with Dean's permission/change grade mode with form (5 pm)	
17	12/13 - 12/17	Final Exam	