![UNM Valencia logo]

MATH 1215: Intermediate Algebra

Instructor

Dr. Ariel Ramirez
aramirez8@unm.edu
Office: LRC 172

Elaine Clark
Division Chair of MECS
eclark@unm.edu

Class Details

Tuesday/Thursday
Class Time: 9-10:15 am
Room: VACT 101

MyMathLab Course ID:
ramirez40983

Tutoring Hours

M/W 10:00 am -12:00 pm
unm.zoom.us
https://unm.zoom.us/
j/91879084949
T/Th 2:00 pm—3:00 pm
LRC 172

Contents

Course Description

This course is a study of linear and quadratics functions and introduces 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 ACT Math =>18 or SAT Math Section =>490 or ACCUPLACER Next-Generation Advanced Algebra and Functions =>228, or QRAS=>248, or Arithmetic=>285 or B+ in Alg II or B- or B in Statistics or CRM or C or lower in Precalculus, Trigonometry, Calculus. Check with your adviser to make sure you meet the requirements.

Get To Know Your Professor

Dr. Ariel Ramirez is an Assistant Professor of Mathematics at UNM-Valencia. He has taught college-level mathematics both at the undergraduate and graduate levels since 2000. He grew up in Chicago, IL. He has a Bachelor's degree in Astronomy from The University of Illinois at Urbana-Champaign, a Master's degree in Mathematics from the University of Illinois at Chicago, and a Ph.D. in Mathematics Education from Illinois State University.

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.

Course Materials & Requirements

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

All the information on the course, including syllabus and assignments, is located in UNM-Learn (Blackboard). See learn.unm.edu

Course Materials & Requirements (continued)

Required: Appropriate MyMathLab (MML) access code (do not purchase a generic code, in this case, the code is book specific). You may purchase the 18-week access code for a lower price, but you *cannot* upgrade to the lifetime code once you purchase the restricted one. Go to **www.mymathlab.com** to get started. From here, either register as a student or sign in to your current account. The MyMathLab Course ID is *ramirez40983.*

Optional: You may "upgrade" your access by purchasing a hard copy of the book directly from Pearson for an additional cost (between $50 and $60 before tax). There will be copies of the book on reserve for use in the library (you will not be able to take the book from the library home).

Technical Skills:
To participate and succeed in this class, you will need to be able to perform the following basic technical tasks:
- 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
- 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.
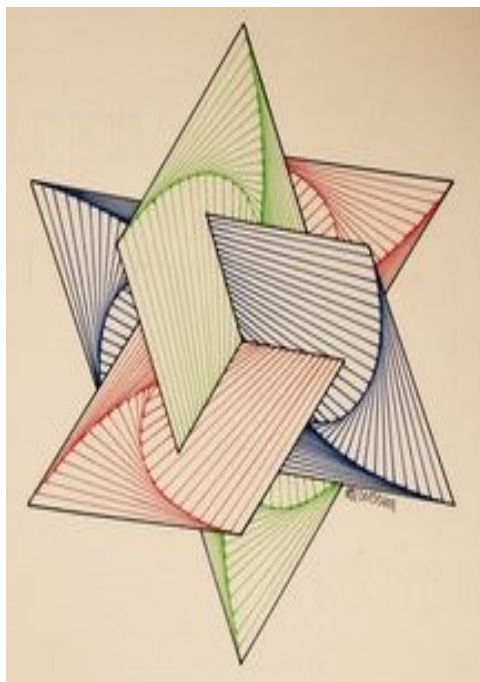
Technical Requirements:
Computer

A high-speed Internet connection is highly recommended.
Supported browsers include Chrome, Edge, Firefox, Safari, and Internet Explorer.
Any computer capable of running a recently updated web browser should be sufficient to access your online course. However, remember that processor speed, amount of RAM, and Internet connection speed can *greatly* 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. 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.

- 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

Classroom Policies

Attendance / Participation (10%)
You are expected to be <u>on time</u> for each class, stay the <u>entire</u> 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 a class, send me an email indicating the date of the absence to receive an excused absence.

Arrange before the next class meeting to get notes from a classmate. The student bears full responsibility for the material and information covered in class.

Each student starts with 100 attendance points. Attendance is taken at the **beginning** of class. Seven attendance points are deducted for each unexcused absence; Four attendance points for tardiness.

Online Homework (15%)
Homework is assigned nearly every week based on the 13 units in the course outline. Weekly assignments in MyMathLab must be completed not later than the indicated date in MML. **Each homework assignment is worth 25 points**.

abcgallery.com – Internet's biggest art collection

"Gorge Improvisation" - Kandinsky 1914

Written Homework (20%)
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. **Each homework assignment is worth 25 points**. **Late homework has a week's grace period and will receive a 20% penalty.**

Classroom Policies (continued)

Projects (20%)

During the semester, each unit will have a project for a total of thirteen small projects. The purpose of the projects is to apply some of the concepts from the course. If available, you may have some class time to begin or work on the project, but it will be designed for you to complete at home. You can work with each other on these projects. I do require *individual* submissions of the project, not one group paper. **Each project is worth 20 points**. **Late projects have a week's grace period and will receive a 20% penalty.**

Exams (15%)

There will be two exams during the semester given during class. These will correspond to the final exams for Math 1215X and Math 1215Y, respectively. Each is worth 100 points. If you are ill or an unexpected event happens and cannot make it to the exam, you have one week to make it up.
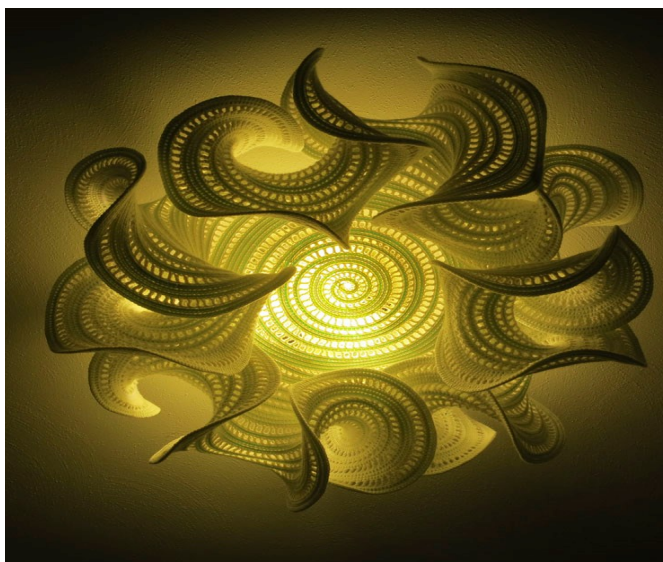
Hyperbolic Lamp Shade

Grading

COURSE AVERAGES:

Attendance/Class Participation	10%
MyMathLab Online Homework	15%
Written Homework	20%
Projects	20%
Exams (two, 100 points each)	15%
Cumulative Final Exam*	20%
Total	**100%**

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

*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.

University Policies

UNM Administrative Mandate on Required Vaccinations
All students, staff, and instructors are required by UNM Administrative Mandate on Required Vaccinations to be fully vaccinated for COVID-19 as soon as possible, but no later than September 30, 2021, and must provide proof of vaccination or a UNM validated limited exemption or exemption no later than September 30, 2021, to the UNM vaccination verification site. Students seeking medical exemption from the vaccination policy must submit a request to the UNM verification site for review by the UNM Accessibility Resource Center. Students seeking a religious exemption from the vaccination policy must submit a request for reasonable accommodation to the UNM verification site for review by the Compliance, Ethics, and Equal Opportunity Office. For further information on the requirement and on limited exemptions and exemptions, see the UNM Administrative Mandate on Required Vaccinations.
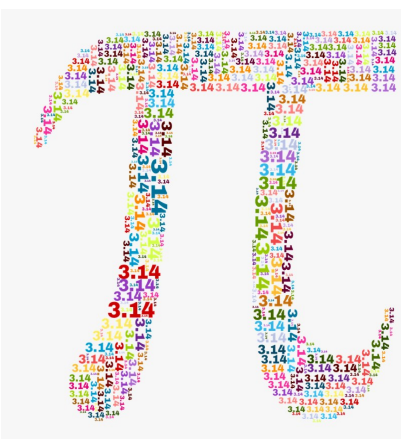
UNM Requirement on Masking in Indoor Spaces
All students, staff, and instructors are required to wear face masks in indoor classes, labs, studios, and meetings on UNM campuses; see masking requirement. Vaccinated and unvaccinated instructors teaching in classrooms must wear a mask when entering and leaving the classroom and when moving around the room. When vaccinated instructors are able to maintain at least six feet of distance, they may choose to remove their masks for increased communication during instruction. Instructors who are not vaccinated (because of an approved medical or religious exemption) or who are not vaccinated yet, must wear their masks at all times. Students who do not wear a mask indoors on UNM campuses can expect to be asked to leave the classroom and to be dropped from a class if failure to wear a mask occurs more than once in that class. Except for the limited cases described above, students and employees who do not wear masks in classrooms and other indoor public spaces on UNM campuses are subject to disciplinary actions. If you are sick, STAY HOME. Communicate your situation with your Professor/Supervisor. Contact the COVID Call Center 505.515.8212 and follow any guidance related to testing or quarantining.

Communication 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.

Acceptable masks and mask-wearing in class: A two-layer mask that covers the nose and mouth and is cleaned regularly is acceptable, as are disposable medical masks, KN95, KF94, FFP1, and FFP2 masks. A face shield is not sufficient protection. It is vital that you wear your mask correctly, covering your nose and mouth. Removing your mask for an extended period to eat or drink in class violates the university mask requirement and endangers others.

Consequences of not wearing a mask properly: If you don't wear a mask or do not wear a mask properly by covering your nose and mouth, you will be asked to leave class. If you fail to wear a mask properly on more than one occasion, you can expect to be dropped from the class. If you insist on remaining in the classroom while not wearing a mask, the class will be dismissed for the day to protect others, and you will be dropped from the class

The instructor will try to have a few disposable masks available in the classroom on a first-come, first-served basis.

University Policies (continued)

Title IX Statement: Our classroom and our university should always be spaces of mutual respect, kindness, and support, without fear of discrimination, harassment, or violence. Should you ever need assistance or have concerns about incidents that violate this principle, please access the resources available to you on campus, especially the LoboRESPECT Advocacy Center and the support services listed on its website (http://loborespect.unm.edu/). Please note that, because UNM faculty, TAs, and GAs are considered "responsible employees" by the Department of Education, any disclosure of gender discrimination (including sexual harassment, sexual misconduct, and sexual violence) made to a faculty member, TA, or GA must be reported by that faculty member, TA, or GA to the university's Title IX coordinator at the Office of Compliance, Ethics, and Equal Opportunity. For more information on the campus policy regarding sexual misconduct, please see: https://policy.unm.edu/university-policies/2000/2740.html.
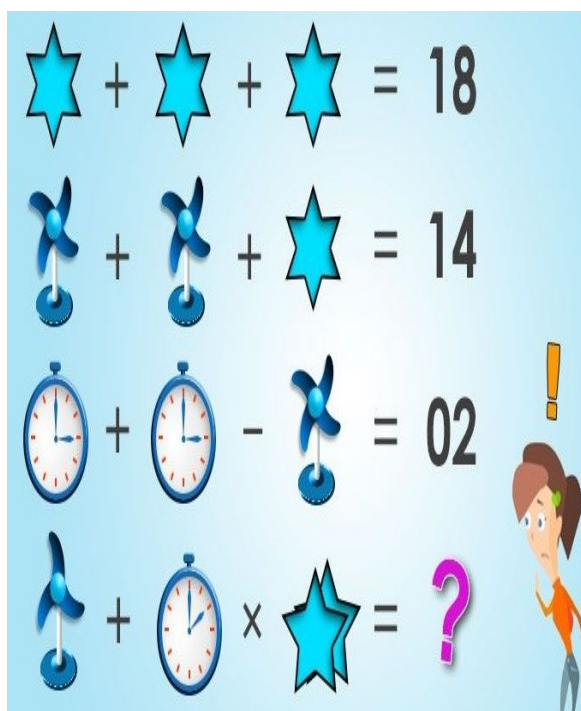
Accommodations: In accordance with University Policy 2310 and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that you take the initiative to bring such needs to the instructor's 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 or arcsrvs@unm.edu for additional information.

UNM is committed to providing courses that are inclusive and accessible for all participants. As your instructor, it is my objective to facilitate an accessible classroom setting, in which students have full access and opportunity. If you are experiencing physical or academic barriers, or concerns related to mental health, physical health and/or COVID-19, please consult with me after class, via email/phone or during office hours. You are also encouraged to contact Accessibility Resource Center at arcsrvs@unm.edu or by phone 277-3506.

If you are a Valencia campus student, contact Equal Access Services at Valencia Campus at (505)925-8560 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.

Support in Receiving Help: Students who ask for help are successful students. I encourage students to be familiar with services and policies that can help them navigate UNM successfully. Many services exist to help you succeed academically, such as peer tutoring at CAPS and http://mentalhealth.unm.edu. There are plenty of ways to find your place and your pack at UNM: see the "student guide" tab on my.unm, students.unm.edu, or ask me for information about the right resource center or person to contact.

Doing the Right Thing: UNM has policies to preserve and protect you and the academic community available in the Student Pathfinder as well as in the Faculty Handbook. These include policies on student grievances D175 (undergraduates), academic dishonesty (D100), and respectful campus (CO9). Please ask for help in understanding and avoiding plagiarism (passing the work or words of others off as your own work or words) or other forms academic dishonesty. Doing something dishonest in a class or on an assignment can lead to serious academic consequences. Come talk with me about your concerns or needs for academic flexibility or talk with support staff at one of our student resource centers before you do something that may endanger your career.

University Policies (continued)

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. https://copyright.unm.edu

Accessibility Statements

Blackboard's Accessibility statement https://www.blackboard.com/blackboard-accessibility-commitment

Microsoft's Accessibility statement https://www.microsoft.com/en-us/accessibility/

Omar Khayyam 1048-1131
Khayyam was an astronomer, astrologer, physician, philosopher, and mathematician. In 1070, he published *Treatise on Demonstration of Problems of Algebra and Balancing*. In it he showed that a cubic equation can have more than one solution. He also showed how the intersections of conic sections such as parabolas and circles can be utilized to yield geometric solutions of cubic equations.
<www.famousscientists.org/omar-khayyam/>.

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://pathfinder.unm.edu/campus-policies/academic-dishonesty.html and student code of conduct: https://pathfinder.unm.edu/code-of-conduct.html

Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question 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.

Student Resources:

If you are struggling in this course, do not be afraid to ask for help!

- Ask My Instructor: Please use the Ask My Instructor button in MyMathLab. This button is available in the computational assignments and the quizzes and sends a message to my email with a link to the question. Do not just send the link, be specific about the problem you are struggling with.
- Tutoring Hours: See my tutoring hours listed at the beginning of this syllabus.
- Form online study groups: You may work together with other members of our class.
- Free Tutoring: http://valencia.unm.edu/campus-resources/the-learning-center/learning-center.html

Math 1215: Intermediate Algebra (Fall 2021) (*Course outline is subject to change*)

Week	Dates	Sections / Topics	Assignments
1	8/24 - 8/26	Unit 1: Sections. 8.3, & 8.4	
2	8/31 – 9/2	Unit 2: Sections. 8.8, & 8.6 Unit 3: Sections. 9.1, & 9.2	MML Unit 1 homework due Written Unit 1 HW & Project 1 due
	9/3	**Last day to add a course (5 pm)**	
3	9/7 – 9/9	Unit 3: Sections. 9.3, 9.4, & 9.5	MML Unit 2 homework due Written Unit 2 HW & Project 2 due
	9/10	**Last day to drop a course without a grade (5 pm)**	
4	9/14 – 9/16	Unit 4: Sections. 9.6, & 10.1 Unit 5: Sections. 10.2, & 10.3	MML Unit 3 homework due Written Unit 3 HW & Project 3 due
5	9/21 – 9/23	**Review Test # 1**	MML Unit 4 homework due Written Unit 4 HW & Project 4 due
6	9/28 – 9/30	Unit 6: Sections: 11.1, 11.2, 11.3, & 11.4	MML Unit 5 homework due Written Unit 5 HW & Project 5 due
7	10/5 – 10/7	Unit 6: Section: 11.6 Unit 7: Sections. 12.1, 12.2, & 12.3	MML Unit 6 homework due Written Unit 6 HW & Project 6 due
8	10/12	Unit 8: Sections: 14.1, & 14.2	MML Unit 7 homework due Written Unit 7 HW & Project 7 due
	10/14 – 10/15	**Fall Break**	
9	10/19 – 10/21	Unit 8: Sections. 14.3, & 14.4 Unit 9: Sections. 15.1, & 12.6	
10	10/26 – 10/28	Unit 9: Sections. 16.2, & 16.5	MML Unit 8 homework due Written Unit 8 HW & Project 8 due
11	11/2 – 11/4	**Review Test #2**	MML Unit 9 homework due Written Unit 9 HW & Project 9 due
12	11/9 – 11/11	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	11/16 – 11/18	Unit 11: Sections. 13.7, & 14.7 Unit 12: Section. 15.2	MML Unit 10 homework due Written Unit 10 HW & Project 10 due
14	11/23	Unit 12: Sections. 15.3, & 15.4	MML Unit 11homework due Written Unit 11 HW & Project 11 due
	11/25 – 11/26	**Thanksgiving Holiday**	
15	11/30 – 12/2	Unit 12 : Section. 15.8 Unit 13: Section. 17.2	MML Unit 12 homework due Written Unit 12 HW & Project 12 due
16	12/7 – 12/9	Unit 13: Section. 17.3 **Review**	MML Unit 13 homework due Written Unit 13 HW & Project 13 due
	12/10	**Last day to drop with Dean's permission/change grade mode with form (5 pm)**	
17	12/14 - 12/16	**Final Exam**	

Course Student Learning Outcomes

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

A. Demonstrate appropriate use of basic function language and notation.
 Communicate or present mathematical concepts using correct mathematical notation and terminology.
 Correctly use function notation and vocabulary related to functions.
 Determine function values for given domain values and determine domain values for given function values.
 Determine domains for specific functions.

B. Convert between equivalent forms of algebraic expressions.
 Simplify expressions using properties of exponents.
 Add, subtract, and multiply polynomials.
 Rewrite line equations in different forms (slope-intercept, point-slope, standard)
 Factor some types of polynomials.
 Simplify radical expressions.
 Simplify rational expressions.
 Rewrite exponential functions in logarithmic form and vice versa.

C. Solve single-variable equations.
 Solve for a single variable in a proportion.
 Solve for a single variable in a linear equation.
 Solve for a specified variable in a formula.
 Solve quadratic equations using factoring, quadratic formula, and the square root method.
 Solve equations containing rational expressions.
 Solve equations containing radical expressions.
 Solve absolute value equations in one variable.
 Solve exponential and logarithmic equations using equating bases.

D. Interpret and communicate algebraic solutions graphically and numerically.
 Determine equations for lines in the three forms – slope-intercept and point-slope.
 Sketch the graphs of linear functions.
 Interpret slope in relation to variable coefficients and as a rate of change.
 Graph linear inequalities in one variable on a number line and write corresponding interval notation.
 Determine when linear equations represent parallel and perpendicular lines.
 Sketch graphs of quadratic functions.

E. Demonstrate contextual problem-solving skills that include setting up and solving problems and interpreting solutions in context.
 Determine linear equations from application problems and solve.
 Set up a linear proportion from an application problem and solve.
 Analyze solutions to application problems and give them contextual meaning.
 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)
 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.
 Perform unit conversions.
 Solve linear inequalities in one variable.
 Simplify expressions written in scientific notation.
 Simplify multiplication and division problems using scientific notation.
 Apply solution methods learned to application problems.
 Solve systems of two linear equations graphically and algebraically.
 Perform operations with radical expressions.
 Perform operations with rational expressions.
 Solve absolute value inequalities in one variable.

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