

MATH 1220: College Algebra

Instructor

Dr. Ariel Ramirez

aramirez8@unm.edu

Office: LRC 133

Class Details

Monday/Wednesday

Class Time: 12—2:45 pm

Room: VAAS 124

Tutoring Hours

T/Th 10:00 am –11:00 am

unm.zoom.us

[https://unm.zoom.us/](https://unm.zoom.us/j/91369226911)

[j/91369226911](https://unm.zoom.us/j/91369226911)

Or by appointment



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Course Description

The study of equations, functions and graphs, reviewing linear and quadratic functions, and concentrating on polynomial, rational, exponential and logarithmic functions. Emphasizes algebraic problem solving skills and graphical representation of functions.

(3 Credit Hours).

Prerequisites: Math 1215 or (1215X and 1215Y and 1215Z) or ACT Math ≥ 22 or SAT Math Section ≥ 540 or AC-CUPLACER Next-Generation Advanced Algebra and Functions =239-248. 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

The course serves as preparation for Math 1240 and Math 1430. In this course, students will build on their knowledge of polynomial, rational, absolute value, radical, exponential and logarithm functions in several contexts. A complete list of the Student Learning Objectives for this course is given at the end of this syllabus.

Course Materials & Requirements

Textbook:

"College Algebra," 2nd edition, by Jay Abramson, 2021: OpenStax.org
ISBN #978-1-951693-41-1

All the information on the course, including syllabus and assignments, is located in Canvas (Blackboard). See canvas.unm.edu

Course Materials & Requirements (continued)



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.

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

Classroom Policies

Attendance / Participation (10%)

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 a class, send me an email indicating the date of the absence to receive an excused absence.

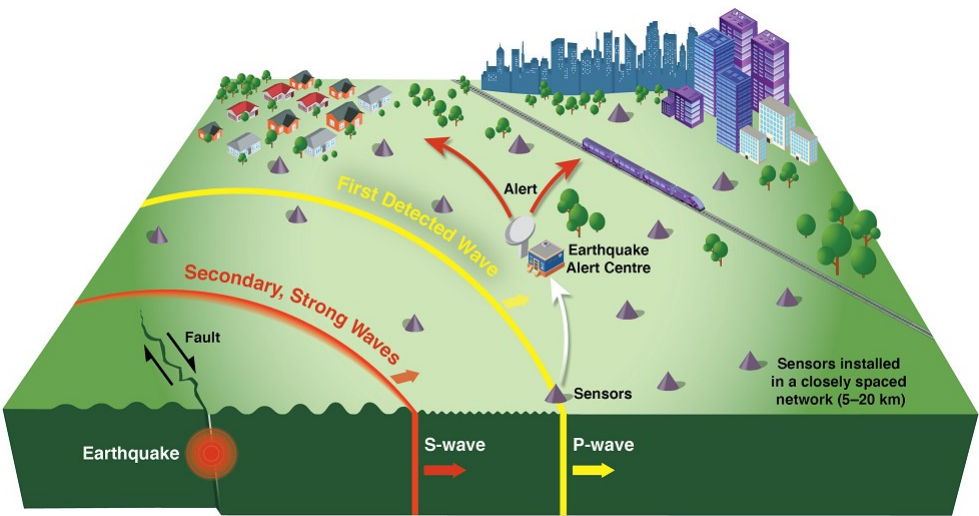
Arrange before the next class meeting to get notes from a classmate. The student bears full responsibility for the material and information covered in class.

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

Classroom Policies (continued)

Written Homework (40%)

Each week 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.**



Exam (20%)

There is one midterm exam during the semester given during class. The midterm exam will cover the material from the beginning of the course. If you are ill or an unexpected event happens and cannot make it to the exam, you have one week to make it up.

Grading

COURSE AVERAGES:

Attendance/Class Participation	10%
Written Homework	40%
Midterm Exam	20%
Cumulative Final Exam	30%
Total	100%

GRADING SCALE:

Letter Grade Weighted Average

A+	[98,100]	A	[92,98]	A-	[90,92]
B+	[88,90]	B	[82,88]	B-	[80,82]
C+	[78,80]	C	[72,78]	C-	[70,72]
D+	[68,70]	D	[60,68]		
F	[0,60]				

University Policies

UNM Administrative Mandate on Required Vaccinations

UNM requires COVID-19 vaccination, a booster for all students, faculty, and staff, or an approved exemption (UNM Administrative Mandate on Required Vaccinations). Proof of vaccination and booster, or a medical, religious, or online remote exemption, must be uploaded to the UNM vaccination verification site. Failure to provide this proof may result in a registration hold and/or disenrollment for students and disciplinary action for UNM employees

Booster Requirement: Individuals who received their second dose of a Pfizer or Moderna vaccine on or before June 15, 2021, or their single dose of a Johnson & Johnson vaccine on or before October 15, 2021, must provide documentation of receipt of a booster dose no later than January 17, 2022. Individuals who received their second dose of a Pfizer or Moderna vaccine after June 15, 2021, or who received their single dose of Johnson & Johnson after November 15, 2021, must provide documentation of receipt of a booster within four weeks of eligibility, according to the criteria provided by the FDA (6 months after completing an initial two-dose Moderna vaccine, 5 months after completing the Pfizer sequence, and 2 months after receiving a one-dose Johnson and Johnson vaccine).

International students: Consult with the Global Education Office.

Exemptions: Individuals who cannot yet obtain a booster due to illness should request a medical, religious, or online remote exemption (which may have an end date) and upload this to the vaccination verification site.

Medical and religious exemptions validated in Fall 2021 (see your email confirmation) are also valid for Spring 2022 unless an end date was specified in the granting of a limited medical exemption. Students must apply for a remote online exemption every semester.

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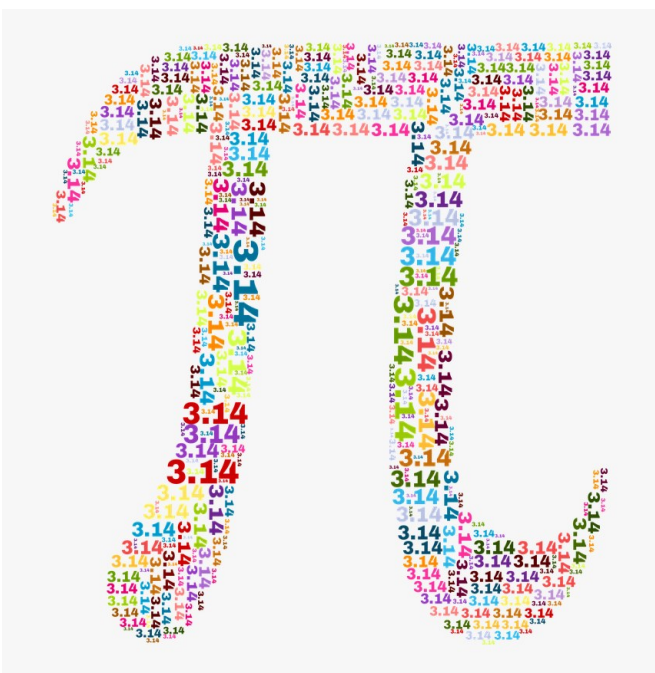
UNM on Masking in Indoor Spaces

It is optional for all students, staff, and instructors are required to wear face masks in indoor classes, labs, studios, and meetings on UNM campuses.

COVID-19 Symptoms and Positive Test Results:

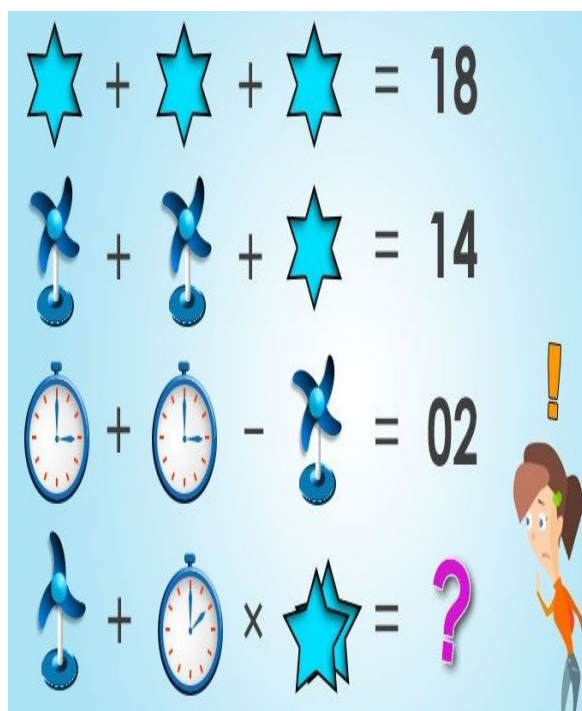
Please do not come to a UNM campus if you are experiencing symptoms of illness or have received a positive COVID-19 test (even if you have no symptoms). Contact your instructors and tell them that you should not come to class due to symptoms or diagnosis. Students who need support addressing a health or personal event or crisis can find it at the Lobo Respect Advocacy Center.

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.



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](http://my.unm.edu), 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 ([C09](#)). 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](https://copyright.unm.edu) has additional helpful information on this topic. <https://copyright.unm.edu>

Accessibility Statements

[Blackboard's Accessibility statement](https://www.blackboard.com/blackboard-accessibility-commitment) <https://www.blackboard.com/blackboard-accessibility-commitment>

[Microsoft's Accessibility statement](https://www.microsoft.com/en-us/accessibility/) <https://www.microsoft.com/en-us/accessibility/>

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.

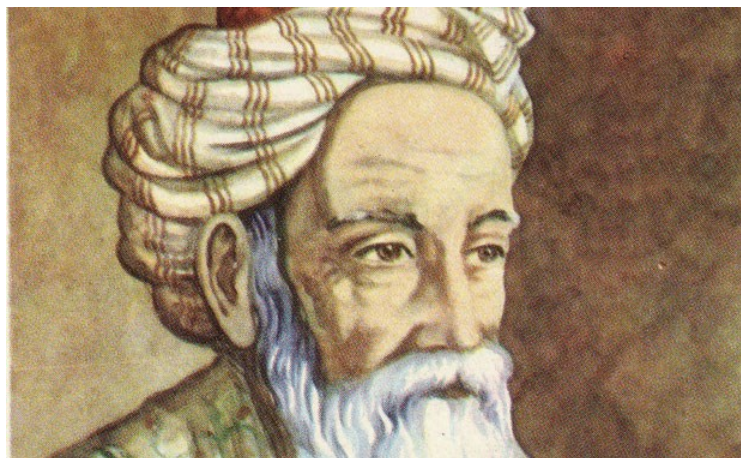
Academic Dishonesty is defined as:

"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!

- 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>



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.

<http://www.famousscientists.org/omar-khayyam/>.

Math 1220: College Algebra (Summer 2022) (*Course outline is subject to change*)

Week	Dates	Sections / Topics	Assignments
1	6/6—6/8 M/W	Introduction / Review Sec. 2.1, 2.2, 2.5	
	6/10 F	Enrollment Cancellation for Non-Payment Last day to add a course	
2	6/13—6/15 M/W	Sec. 2.6, 2.7, 3.1 Sec. 3.1, 3.2, 3.3	Homework #1 Due
	6/17 F	Last day to Drop for 100% Tuition Refund / Last day to Drop Without a 'W' Last day to change grading options	
3	6/20—6/22 M/W	Sec. 3.3, 3.4, 3.5 Sec. 3.5, 3.6, 3.7	Homework #2 Due
4	6/27—6/29 M/W	Catch-up and Review Exam Sec. 4.1	Homework #3 Due
	7/4 M	No Class: Independence Day Holiday	
5	7/6 W	Sec. 4.1, 4.2, 5.1	Homework #4 Due
6	7/11—7/13 M/W	Sec. 5.2, 5.6 Sec. 6.1, 6.2	Homework #5 Due
7	7/18—7/20 M/W	Sec. 6.3, 6.4 Sec. 6.5, 6.6	Homework #6 Due
	7/29 F	Last day to withdraw with student services per- mission	
8	7/25—7/27 M/W	Catch-up and Review Final Exam	Homework #7 Due

Course Student Learning Outcomes

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

- 1. Use function notation; perform function arithmetic, including composition; find inverse functions.**
- 2. Identify functions and their transformations given in algebraic, graphical, numerical, and verbal representations, and explain the connections among these representations.**
- 3. Graph and interpret key feature of functions, e.g., intercepts, leading term, end behavior, asymptotes, domain and range.**
- 4. Solve equations algebraically to answer questions about graphs, and use graphs to estimate solutions to equations.**
- 5. Solve contextual problems by identifying the appropriate type of function given the context and creating a formula based on the information given.**
- 6. Communicate mathematical information using proper notation and verbal explanations.**