

# **MATH 1220 : COLLEGE ALGEBRA**

**Room A129, Section 501 (M/W 9:00 - 10:15), CRN 64279**

**Fall 2019**

**Instructor: Ian Burch**

**E-Mail: [ianburch@unm.edu](mailto:ianburch@unm.edu)**

**Office and Hours: A123                    M/W 8:30 - 9:00, T/Th 9:00 - 10:00**

**STEM Center M/W 10:15 - 11:30 & 2:45 - 4:00**

## **Course Description**

This course will develop a deep understanding of polynomial functions and their graphs and properties, as well as teach proper algebraic manipulation of fractions, exponents, and radicals. Students will build up a knowledge of logarithms and exponents and their applications and a thorough knowledge of functions and their properties. All of these function types will be coupled with applications of algebra in a variety of real-world and scientific situations

## **Course Goals**

By the end of the course, students will have built upon their knowledge of polynomial, rational, absolute value, radical, exponential and logarithm functions in the following contexts:

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

**Materials:**

- MyMathLab access, COURSE CODE **burch16614**
- Scientific calculator
- Homework Folder
- Optional : Hard copy of *College Algebra: Concepts Through Functions 4th Edition* by Sullivan (A digital copy is included with MML course access, ISBN: 9780134686967)

**MML Work:**

- If you have taken a math class before that used MyMathLab (MML) you can log in first then register for a new course using the course code **burch16614**
- If this is your first time using MyMathLab, select to register as a student. Follow the prompts to register and make sure to use your official UNM email.
- If you are waiting for financial aid, use the 14 day temporary access, but you must officially register by September 6th.
- **STUDENTS WHO DO NOT LOG IN TO MML BEFORE AUGUST 30th MAY BE DROPPED AUTOMATICALLY**

**Grade Breakdown:**

Final Exam	30%
Midterm Exam	20%
MML Homework	25%
Written Homework	20%
Attendance	5%

Letter grades will be given as follows, with + or - given for the highest and lowest 3% in each range, respectively. Incomplete (I) grades will not be assigned without documented, extenuating, circumstances.

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
0% - 59%	F

**Tentative Schedule:**

Week 1: Lines & Distance	(F1, F3)
Week 2: Linear Equations	(2.1, 6.1)
Week 3: Quadratics	(2.3, 2.4)
Week 4: Quadratics, cont	(2.3, 2.4)
Week 5: Circles & Inequalities	(2.5, F4)
Week 6: Graphing Functions	(F2, 1.1, 1.2)
Week 7: Function Properties	(1.3, 1.4)
Week 8: Review & <b>Midterm</b>	
Week 9: Function Transformations	(1.5)
Week 10: Polynomials	(3.1, 3.2)
Week 11: Rational Functions	(3.4, 3.5)
Week 12: Inverses	(4.1, 4.2)
Week 13: Exponents & Logarithms	(4.3, 4.4, 4.5)
Week 14: Exponential Applications	(4.6, 4.7, 4.8)
Week 15: TBD	
Week 16: Review for Final	
Week 17: <b>Final Exam</b>	

**Late Work:**

Homework past the due date will not be accepted without an emailed or written request prior to the deadline.

**Expectations:**

Students are expected to conduct themselves in a professional and collegial manner. Please refrain from using cell phones during class unless approved in advance by instructor. Absences may be excused only with a documented reason, preferably given in advance. Students with more than 4 absences may be dropped from the course

**Disability Statement:**

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 [arc.unm.edu](http://arc.unm.edu) for additional information.

If you need an accommodation based on how course requirements interact 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.

### **Academic Integrity:**

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student 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.

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.

### **Credit-hour Statement:**

This is a three credit-hour course. Class meets for three 50-minute sessions of direct instruction for fifteen weeks during the Fall 2019 semester. Students are expected to complete a *minimum* of six hours of out-of-class work (or homework, study, assignment completion, and class preparation) each week.

### **Title IX :**

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>

**Citizenship and/or Immigration Status:** All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community. The Administration's welcome is found on our website:

<http://undocumented.unm.edu/>.