



## **Course Title: College Algebra**

**Course #: Math 1220**

**Credit Hours: 4**

**Semester: Spring 2022**

**Faculty:** Bruce Lewis

**E-mail:** [blewis@navajotech.edu](mailto:blewis@navajotech.edu)

**Office Hours:** Monday and Wednesday 1pm-2pm, Tuesday and Thursday 9am-10am

**Preferred Communication:** Email

**Modality:** In-person

**Class Location and Meeting Times:** Building E, Room 102, Monday and Wednesday at 2pm-4pm

**Required Materials:** textbook, notebook with paper, graph paper, ruler

**Textbooks:** College Algebra by Jay Abramson (Openstax publisher)

**Tools:** DESMOS graphing calculator phone app

### **Mission, Vision, and Philosophy**

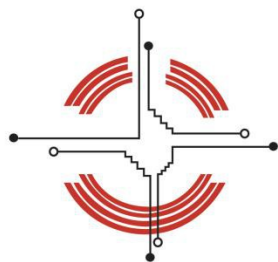
*Mission:* Navajo Technical University honors Diné culture and language, while educating for the future.

*Vision:* Navajo Technical University provides an excellent educational experience in a supportive, culturally diverse environment, enabling all community members to grow intellectually, culturally, and economically.

*Philosophy:* Through the teachings of Nitsáhákees (thinking), Nahátá (planning), Íina (implementing), and Siihasin (reflection), students acquire quality education in diverse fields, while preserving cultural values and gaining economic opportunities.

### **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. Prerequisites: A grade of C or better in MATH-1215 or satisfactory placement scores. Offered: Fall, Spring, Summer, Online.



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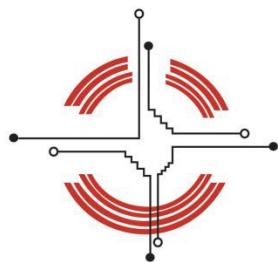
Course Outcomes	Course Assessments
Students will build on their knowledge of polynomial, rational, absolute value, radical, exponential and logarithm functions in the following contexts:	Pre-test, weekly quizzes, midterm, and final exam (post-test).
1. Use function notation; perform function arithmetic, including composition; find inverse functions.	
2. Identify functions and their transformations given in algebraic, graphical, numerical, and verbal representations, and explain the connections between these representations.	
3. Graph and interpret key feature of functions, e.g., intercepts, leading term, end behavior, asymptotes.	
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.	

### Connections to Program Assessment (course-embedded measures)

Outcomes: Students should be able to...

Direct measures

1. Demonstrate knowledge of math foundations and context.	Pre and post tests
2. Perform computations in higher mathematics.	Pre and post tests
3. Formulate complete, concise, and correct mathematical proofs.	Pre and post tests
4. Solve real world math related problems.	Pre and post tests



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## Course Activities

Week	Chapters/Reading	Assignments	Assessments
1	Chapter 1	See Course Outline	Quiz 1
2	“	“	Quiz 2
3	Chapter 2	“	Quiz 3
4	“	“	Quiz 4
5	Chapter 3	“	Quiz 5
6	“	“	Quiz 6
7	Chapter 4	“	Quiz 7
8	“	“	Quiz 8 and Midterm
9	Chapter 5	“	Quiz 9
10	“	“	Quiz 10
11	Chapter 6	“	Quiz 11
12	“	“	Quiz 12
13	Chapter 7	“	Quiz 13
14	“	“	Quiz 14
15	Review	“	Quiz 15
16	“		Final Exam

### Grading Plan

Weekly Quizzes	30%	90-100%	A
Midterm Exam	35%	80-89%	B
Final Exam	35%	70-79%	C
		60-69%	D
		Below 60%	F

### Grading Policy

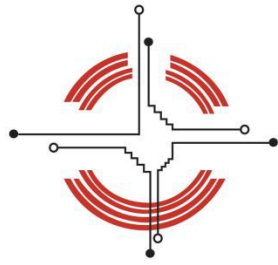
Students must do their own work. Cheating and plagiarism are strictly forbidden. Cheating includes (but is not limited to) plagiarism, submission of work that is not one's own, submission or use of falsified data, unauthorized access to exams or assignments, use of unauthorized material during an exam, or supplying or communicating unauthorized information for assignments or exams.

### Participation

Students are expected to attend and participate in all class activities. Points will be given to students who actively participate in class activities including guest speakers, field trips, laboratories, and all other classroom events.

### Cell phone and headphone use

Please turn cell phones off **before** coming to class. Cell phone courtesy is essential to quality classroom learning. Headphones must be removed before coming to class.



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### **Attendance Policy**

Students are expected to attend all class sessions. If more than ten minutes late, students will be counted as absent. A percentage of the student's grade will be based on class attendance and participation. Absence from class, regardless of the reason, does not relieve the student of responsibility to complete all course work by required deadlines. Furthermore, it is the student's responsibility to obtain notes, handouts, and any other information covered when absent from class and to arrange to make up any in-class assignments or tests if permitted by the instructor. Incomplete or missing assignments will necessarily affect the student's grades. Instructors will report excessive and/or unexplained absences to the Counseling Department for investigation and potential intervention. **Instructors may drop students from the class after three (3) absences unless prior arrangements are made with the instructor to make up work and the instructor deems any excuse acceptable.**

### **Study Time Outside of Class for Face-to-Face Courses**

**For every credit hour in class, a student is expected to spend two hours outside of class studying course materials.**

### **Academic Integrity**

Integrity (honesty) is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. Students who engage in academic dishonesty diminish their education and bring discredit to the University community. Avoid situations likely to compromise academic integrity such as: cheating, facilitating academic dishonesty, and plagiarism; modifying academic work to obtain additional credit in the same class unless approved in advance by the instructor, failure to observe rules of academic integrity established by the instructor. **The use of another person's ideas or work claimed as your own without acknowledging the original source is known as plagiarism and is prohibited.**

### **Diné Philosophy of Education**

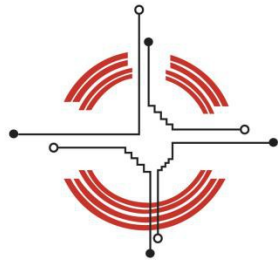
The Diné Philosophy of Education (DPE) is incorporated into every class for students to become aware of and to understand the significance of the four Diné philosophical elements, including its affiliation with the four directions, four sacred mountains, the four set of thought processes and so forth: Nitsáhákees, Nahát'á, Íina and Siih Hasin which are essential and relevant to self-identity, respect and wisdom to achieve career goals successfully.

### **Students with Disabilities**

Navajo Technical University is committed to serving all students in a non-discriminatory and accommodating manner. Any student who feels that she or he may need special accommodations should contact the Accommodations Office (<http://www.navajotech.edu/student-services#accommodations-services>) in accordance with the university's Disability Accommodations Policy (see [http://www.navajotech.edu/images/about/policiesDocs/Disability\\_Exhibit-A\\_6-26-2018.pdf](http://www.navajotech.edu/images/about/policiesDocs/Disability_Exhibit-A_6-26-2018.pdf)).

### **Email Address**

Students are required to use NTU's email address for all communications with faculty and staff.



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**Final Exam Date: Wednesday May 11 at 2pm**

**Important Dates:**

Martin Luther King Holiday is January 17<sup>th</sup>

Last day to add/drop without a W is January 21

Presidents' Day is February 21

Spring graduation petition is due on February 25

Midterm exams are March 7 to March 11

Spring Break is March 14 to March 18

Last day to withdraw with a W is March 31

Final exams is May 9 to May 12

Spring graduation is on May 13