Navajo Technical University http://www.navajotech.edu
PO Box 849, Crownpoint, NM 87313 Tel: (505) 387-7401

Course Title: College Algebra
Course #: MATH 1220-2

Credit Hours: 4
Semester: Spring 2022
Cap: 15

Faculty: Dr. Carlos Paez **E-mail**: cpaez@navajotech.edu
Office: MOD 9 **Office Phone**: (505) 387-7429
Office Hours (face-to-face or online): online: Email anytime but will respond within 24 hours Monday-Thursday, will respond within 48 hours Friday-Sunday.
Face to face (by appointment only): Tuesday 3-5, Wednesday 9am-2pm.
Preferred Communication (email and/or text; will respond within 24 hours): email

Modality (face-to-face, hybrid, or online): face to face with web based, WebAssign
Class Location and Meeting Times (if face-to-face): MOD1-Transportation Classroom T/R 8-9:40am
Meeting Hours and Online Hours (if hybrid):

Required Materials: WebAssign Access Code please get this from the book store ASAP
Textbook (not required): College Algebra
By Ron Larson, 11th Edition
ISBN13: 9780357454411
ISBN10: 0357454413
Tools: Scientific Calculator / Graphing Calculator
Laptop and Internet Access: Every student is required to own a laptop and have internet access.
Lab Fee (if applicable): (access code fee)

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), Íína (implementing), and Siihasin (reflection), students acquire quality education in diverse fields, while preserving cultural values and gaining economic opportunities.

Course Description
College Algebra will cover lessons pertaining to Functions and Graphs, Polynomial and Rational Functions, Solving Systems of Equations/Inequalities, Matrices and Probabilities. Also, the course will be integrated to other fields of study to make it real and relevant. At times, the learning process relating to the Navajo culture in the areas of Nitsahakees, Nahatah, Iina, and Sihasin as well as other cultures will be covered.

Course Outcomes	Course Assessments
Sketch the graphs of linear quadratic higher-order polynomial, rational, absolute value, exponential, logarithmic, and radical functions	Formative assessment: Complete reading assignments, homework assignments, quizzes and exams.
Construct graphs using a variety of techniques including plotting points, using properties of basic transformations of functions, and by using key characteristics of functions such as end behavior, intercepts and asymptotes	
Determine the key features a function such as domain/range, intercepts, and asymptotes.	
Solve quadratic equations using techniques such as factoring, completing the square and the square root method, and the quadratic formula	
Solve equations using inverse operations for powers/roots, exponents/logarithms and other arithmetic operations.	
Use the equation of a function to determine its domain, to perform function operations, and to find the inverse of a function	
Correctly use function notation and the vocabulary associated with functions.	
Describe the implications of key features of a function with respect to its graph and/or in relation to its real-world context	
Apply the knowledge of functions to identify an appropriate type of function to solve application problems.	
Solve application problems including those requiring maximization or minimization of quadratic functions and exponential growth & decay problems.	
Interpret the results of application problems in terms of their real-world context.	
Demonstrate confidence in solving mathematical problems	

Connections to Program Assessment (Course-Embedded Measures)
Topics:
Chapter 1.- Equations, Inequalities, and Modeling
Chapter 2.- Functions and Their Graphs
Chapter 3.- Polynomial Functions
Chapter 5.- Exponential and Logarithmic Functions
Chapter 6.- Systems of Equations and Inequalities
Chapter 7.- Matrices and Determinants
Chapter 8.- Sequences, Series, and Probability

Course Activities

Week	Date	Class Topics/Reading Due	Assessments
1		Chapter 1.- Equations, Inequalities, and Modeling	Homework Assignments
2		Chapter 1.- Equations, Inequalities, and Modeling	Homework Assignments
3		Chapter 1.- Equations, Inequalities, and Modeling	QUIZ #1
4		Chapter 2.- Functions and Their Graphs	Homework Assignments
5		Chapter 2.- Functions and Their Graphs	QUIZ #2
6		Chapter 3.- Polynomial Functions	Homework Assignments
7		Chapter 3.- Polynomial Functions	Homework Assignments
8		**Midterm Exam**	
9		Chapter 5.- Exponential and Logarithmic Functions	Homework Assignments
10		Chapter 5.- Exponential and Logarithmic Functions	QUIZ #3
11		Chapter 6.- Systems of Equations and Inequalities	Homework Assignments
12		Chapter 6.- Systems of Equations and Inequalities	Homework Assignments
13		Chapter 7.- Matrices and Determinants	Homework Assignments

14		Chapter 7.- Matrices and Determinants	QUIZ #4
15		Chapter 8. Sequences, Series, and Probability	Homework Assignments
16		Chapter 8. Sequences, Series, and Probability	Homework Assignments
17		**Final Exam**	

Schedule Disclaimer: The course schedule outlined in the table above is subject to adjustment depending on the needs of the class to focus more on a specific chapter.

Grading Plan

Homework:	40%	A = 100-90%
Class Participation		B = 89-80%
and attendance:	10%	C = 79-70%
Project(s):		D = 69-60%
Quizzes:	20%	F = 59% or less
Mid-term:	15%	
Final Exam:	15%	
Portfolio:		

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.

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.

Study Time for Hybrid or Blended Courses

For a hybrid or blended course of one credit hour, a student is expected to spend three hours per week studying course materials.

Study Time for Online Courses
For an online course of one credit hour, a student is expected to spend four hours per week 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, Íína and Siih Hasin which are essential and relevant to self-identity, respect and wisdom to achieve career goals successfully.

At NTU's Zuni Campus, the A:shiwi Philosophy of Education offers essential elements for helping students develop Indigenous and Western understandings. Yam de bena: dap haydoshna: akkya hon detsemak a:wannikwa da: hon de:tsemak a:ts'umme. *Our language and ceremonies allow our people to maintain strength and knowledge.* A:shiwi core values of hon i:yyułashik'yanna:wa (respect), hon delank'oha:willa:wa (kindness and empathy), hon i:yyayumoła:wa (honesty and trustworthiness), and hon kohoł lewuna:wediyahnan, wan hon kela i:tsemanna (think critically) are central to attaining strength and knowledge. They help learners develop positive self-identity, respect, kindness, and critical thinking skills to achieve life 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#accomodations-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).

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

Final Exam Date: