Course Information

Course Number: MATH 1314
Course Title: College Algebra
Credit Hours: 3

TARLETON STATE UNIVERSITY
Mathematics

Instructor Details

Instructor: Rachael Thorpe
E-Mail: rthorpe@tarleton.edu

Communication Expectations

Tarleton Today students will need to submit questions through the Student Support button in the left navigation of their Canvas course.

Course Description

This course is structured so that high school students receive the rigor of college courses while also meeting requirements for their high school course. This course will include an in-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices which will satisfy the core curriculum requirement for MATH 1314. This course will also include linear functions, absolute functions, and data analysis and modeling which will satisfy the Texas requirements for Algebra 2.

Course Requirements

Accessing technology is a requirement for all Tarleton Today courses. All components of your Tarleton Today college course will be through Tarleton State University's Canvas. Only use your own Tarleton credentials to access your course materials. Allowing others to use your credentials or signing in and allowing others to complete assignments for you while signed in could result in an academic integrity violation.

Tarleton Canvas URL: https://www.tarleton.edu/oiss/canvas-login/
Click the Tarleton NTNET Account button and use your Tarleton email address and password to login.

Student Orientation: The Student Orientation will provide students an overview of the Tarleton Today program. Students learn about dual enrollment, eligibility, credit decisions, as well as academic integrity.

Daily Grades: Your daily grade will be composed of Canvas Homework Assignments.

- 10% of your daily grades will be dropped at the end of the academic year by Final Exam time.

Unit Exams: There will be 10 Unit Exams throughout the year.

- All Unit Exams will be administered through Canvas in your High School Classroom and proctored by your High School Teacher.
- Unit Exams are comprised of two parts, which will take 2 class days.
- If you miss a Unit Exam, then you will receive a 0 for that exam. The Midterm and Final will replace your one lowest Unit Exam per semester if the score is higher.

Midterm: The Midterm Exam will be a comprehensive exam of Units 1- 5 from the first semester.

- The Midterm Exam is a one-part exam and will take 1 class day.

Final: The Final Exam will be a comprehensive exam of Units 6 – 10 from the second semester.

- The Final Exam is a one-part exam and will take 1 class day.

Student Orientation

Tarleton Today students are required to complete Student Orientation as a part of their course grade. Student Orientation is completed at the beginning of the year and is a completion grade.

Textbook and/or Resource Materials

Materials used in Tarleton Today courses can be found free of charge in the Tarleton Today college course.

A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Course Prerequisites

College Prerequisites: None
High School Prerequisites: Algebra 1

Course Learning Outcomes

Students who complete this course successfully will be able to:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.
6. Solve symbolic and application problems using appropriate strategies.

7. Use appropriate technology to model and/or solve symbolic or algebraic applications using graphical and/or numerical representations of linear, polynomial, rational, exponential, and logarithmic functions.
8. Interpret the graphical and numerical representations of functions to solve (or when appropriate approximate the solution of) symbolic and applied algebraic problems.
9. Appreciate mathematics as an important process by which problem solving and critical thinking skills are developed.
10. Recognize the relevance and usefulness of algebra in everyday life.
11. Analyze functions, using multiple representations.
12. Solve and interpret the solutions of algebra problems, using technology as appropriate.
13. Synthesize varied components of information to form a rational conclusion.
14. Use functions to model real-world situations and use them to make rational decisions.
15. Express ideas in written, visual or oral forms to a range of diverse audiences in multiple settings.
16. Write a clear, concise and logical justification of how the solution to a stated problem was derived.
17. Gather, interpret or use numerical data/observable facts to arrive at an informed conclusion.
18. Analyze functions, using multiple representations.
19. Solve and interpret the solutions of algebra problems, using technology as appropriate.

Grading Policy

Please refer to the current University Catalog for additional information regarding grades and course withdrawal policies. For this course, your grade will be determined in the following manner:

Orientation	2%
Daily Grades	18%
Unit Exams	60%
Midterm	10%
Final Exam	10%

The final grade will be assigned as follows, although the instructor reserves the right to lower the limits slightly at their discretion considering factors such as student attendance.

A = 89.5% or above
B = 79.5% - 89.4%
C = 69.5% - 79.4%
D = 59.5% - 69.4%
F = below 59.5%

Course grades will be rounded to the nearest whole number using the traditional rounding rules. For example, if the course grade is 89.5, that grade would round to a 90 and would be a letter grade of A. A grade of 89.4 would round to an 89 and would be a letter grade of B.
Do not ask your instructor for additional "curving" of course grades outside of rounding to the nearest whole number as described in the bullet point above. "Curving" has already happened with dropping some of the low daily grades (see details below) and replacing the single lowest test grade with the final exam score if the final exam score is higher (see details below).

Grading Feedback Expectations

For assignments submitted on time, expect a grade to be loaded into the Canvas gradebook within 14 days (about 2 weeks). There is no guarantee of grading time for assignments outside of their original due date.

Late/Make-up Work Policy

Missed Daily Work will not be accepted. All daily assignments will be open for a period of time, so students will need to plan accordingly to adhere to due dates.

Students who are absent for school-related reasons must take exams two days before or two days after their section takes the exam.

Students with extenuating circumstances, such as a medical or family emergency, must make up the exam within 5 business days of the student's return to school. Scheduled doctor appointments do not constitute a medical emergency.

All missed exams will need to be coordinated with your high school teacher.

Course Outline

Units	Topics	Assignments
Unit 0 Navigating the Course	Welcome Getting to know Canvas	Student Orientation Module Syllabus Quiz
Unit 1 Function Basics	Functions and their Properties Transformations, Composition, and Inverses of Functions	College Homework Unit 1 Part 1 College Homework Unit 1 Part 2 College Homework Unit 1 Part 3 Exam 1
Unit 2 Systems of Equations & Inequalities and Matrices	Systems of Linear Equations and Inequalities Matrices and Applications	College Homework Unit 2 Part 1 College Homework Unit 2 Part 2 College Homework Unit 2 Part 3 Exam 2
Unit 3 Absolute Value Functions and Complex Numbers	Absolute Value Functions, Equations, and Inequalities	College Homework Unit 3 Part 1 College Homework Unit 3 Part 2 College Homework Unit 3 Part 3

	Complex Numbers	Exam 3
Unit 4 Quadratic Functions & Characteristics	Quadratic Functions and Equations	College Homework Unit 4 Part 1 College Homework Unit 4 Part 2 Exam 4
Unit 5 Solving Quadratic Equations and Inequalities	Quadratic Equations and Inequalities Quadratic Applications	College Homework Unit 5 Part 1 College Homework Unit 5 Part 2 Exam 5
MIDTERM OVER UNITS 1-5		
Unit 6 Polynomial Functions	Polynomial Functions and Characteristics Polynomial Division Zeros of Polynomials Polynomial Applications	College Homework Unit 6 Part 1 College Homework Unit 6 Part 2 Exam 6
Unit 7 Radical Functions and Equations	Definition of Rational Exponents and Simplifying Radical Expressions Graphing Radical Functions and their Transformations Solving Radical Equations and Inequalities Revisiting Inverses	College Homework Unit 7 Part 1 College Homework Unit 7 Part 2 College Homework Unit 7 Part 3 Exam 7
Unit 8 Graphs of Rational Functions	Rational Functions as $f(x) = \frac{1}{x}$ Rational Functions as Polynomial Division	College Homework Unit 8 Part 1 College Homework Unit 8 Part 2 Exam 8
Unit 9 Simplifying Rational Expressions and Solving Rational Equations	Simplifying Rational Expressions Rewriting Rational Functions Simplifying Complex Fractions Solving Rational Equations	College Homework Unit 9 Part 1 College Homework Unit 9 Part 2 College Homework Unit 9 Part 3 Exam 9
Unit 10 Exponential and Logarithmic Functions	Graphs of Exponential and Logarithmic Functions Properties of Exponents and Logarithms Solving Exponential and Logarithmic Equations	College Homework Unit 10 Part 1 College Homework Unit 10 Part 2 College Homework Unit 10 Part 3 Exam 10
FINAL EXAM OVER UNITS 6-10		

For specific learning outcomes and due date information, refer to the Unit Guides that can be found in Canvas.

Optional/Recommended Course Information Items

Important Dates

- **Holidays and No-Class Days**
  - September 4; Labor Day
  - November 22 – 24; Thanksgiving
  - December 22 – January 2; Winter Break
  - January 15; Martin Luther King Day
  - March 11 – 16; Spring Break
  - March 29 – April 1; No Classes
- **Grade-related Dates**
  - Orientation – September 29
  - Tarleton Today Fall Census – September 29
  - Midterm – November 27 to December 6
  - Eligibility – January 15 to February 23
  - Final – April 22 to May 3

Technology Support – Submit a help ticket through the button in the left-hand navigation of your Canvas course. If you need help resetting your password, call 254-968-9885 - Option 1.

University Policies

Academic Integrity Statement and Policy

Cheating, plagiarism, or doing work for another person who will receive academic credit is impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, or the presentation of unacknowledged material as if it were the own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place. Consult the following links for further information on academic conduct.

- Student Judicial Affairs: https://www.tarleton.edu/judicial/academicconduct.html
- Student Handbook: https://www.tarleton.edu/studentrules/code-of-student-conduct.html

Americans with Disabilities Act (ADA) - Student Success

Tarleton State University is committed to complying with the Americans with Disabilities Act (www.ada.gov) and other applicable laws. If you are a student with a disability seeking accommodation for this course, please contact the Office of Disability Resources at 254.968.9400, disability@tarleton.edu, or visit https://www.tarleton.edu/drt/.

Academic Affairs Core Values in the Classroom

Academic Integrity

Tarleton State University's core values are integrity, leadership, tradition, civility, excellence, and service. Central to these values is integrity, which is maintaining a high standard of personal and scholarly conduct. Academic integrity represents the choice to uphold ethical responsibility for one's learning within the academic community, regardless of audience or situation.

Academic Civility

Students are expected to interact with professors and peers in a respectful manner that enhances the learning environment. Professors may require a student who deviates from this expectation to leave the face-to-face (or virtual) classroom learning environment for that particular class session (and potentially subsequent class sessions) for a specific amount of time. In addition, the professor might consider the university disciplinary process (for Academic Affairs/Student Life) for egregious or continued disruptive behavior.

Academic Excellence

Tarleton holds high expectations for students to assume responsibility for their own individual learning. Students are also expected to achieve academic excellence by:

- honoring Tarleton's core values.
- upholding high standards of habit and behavior.
- maintaining excellence through class attendance and punctuality.
- preparing for active participation in all learning experiences.
- putting forth their best individual effort.
- continually improving as independent learners.
- engaging in extracurricular opportunities that encourage personal and academic growth.
- reflecting critically upon feedback and applying these lessons to meet future challenges.

Academic Affairs Service (For Spring Semesters)

In support of Tarleton's core value of service, each student is expected to participate in a service-learning experience as a part of the Spring term's week of service. This experience will challenge students to be engaged in the local community, address a community need, connect course objectives to the world around you, and involve structured student reflection. In this service-learning experience, you will not only enhance your knowledge and skills, but actively use those skills as you serve your community.

Student Rules

Students are responsible for knowing and abiding by the policies and information contained in the Tarleton Student Rules - https://www.tarleton.edu/studentrules.

Tarleton Today Policies

College Credit

This course is offered through a dual enrollment program, which means you may earn credit for MATH 1314 in addition to earning high school credit.

Eligibility

Students who meet certain criteria gain eligibility for the opportunity to earn college credit through the dual enrollment program. The different ways to gain eligibility are detailed below.

Eligibility Pathway	**Requirements**	
College Grade	If you meet the minimum eligibility grade of a D on college assignment and assessments complete during the first part of the course, you are determined eligible for the opportunity to earn college credit based on your grade.	
Texas Success Initiative (TSI)	Submit proof of scores on certain standardized assessments, as shown in the Requirements for Eligibility by TSI table.	
Requirements for Eligibility by TSI		
Assessment	**Subject Area**	**Minimum Score**
TSI	MATH	350
TSIA 2.0	MATH	Math score of 950 or diagnostic level of 6
SAT	MATH	530
ACT	Composite and MATH	23 (Composite) and 19 (MATH)

Credit Decision

If you are eligible to earn college credit, you may accept or decline the college credit earned during a decision period that occurs after you receive your final college grade. You will receive a notification at the beginning of the credit decision period and a reminder before it closes. If you do not make a credit decision, a default decision will be entered for you.

- For a **C or above**, the default decision is to accept the credit and a Tarleton State University transcript **will** be issued.
- For a **D** course grade, credit will be earned, but you will **not** be issued a Tarleton State University transcript unless you enter a credit decision of “accept”.
- For an **F** college grade, credit will not be earned, and you will not be issued a Tarleton State University transcript.

College Transcript

Once college credit has been earned and accepted, you may request an official Tarleton State University transcript through the Office of the Registrar. You will receive an email after the end of year processing has occurred and transcripts are available. This email will also include instructions for ordering your official transcript.

Each university or college has their own policies for credit transferability. If you choose to attend Tarleton, your grades from Tarleton Today courses will count towards your cumulative undergraduate GPA. If you choose to attend another higher education institution, then you will need to contact that institution to see if it will be factored into your GPA at that institution.