College Algebra

M 301: College Algebra
TCCN: MATH 1314
Course Syllabus: 2023 – 2024

UT Austin Faculty Lead	OnRamps Course Staff
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COURSE DESCRIPTION

In College Algebra, students deepen their critical thinking skills and develop their ability to persist through challenges as they explore function families: Linear, Absolute Value, Quadratic, Polynomial, Radical, Rational, Exponential, and Logarithmic. Students analyze data algebraically and with technology while developing their knowledge of properties of functions, matrices, systems of equations, and complex numbers. The pedagogy of the course, Inquiry-Based Learning, encourages students to take an active role in the construction of their learning. This learning will be accomplished by abstraction, generalization, problem-solving, and modeling.

Course Pre-requisites

- Algebra 1
- Geometry (Recommended)

Course Learning Outcomes

By the end of this course, you will have a deeper and more connected understanding of the following:

- Function Families: Linear and Absolute Value Functions; Quadratic and Cubic Functions; Polynomial, Rational, and Radical Functions; Exponential and Logarithmic Functions
- Function Compositions, Transformations, and Inverses
- Matrices and Systems of Equations and Inequalities
- The Complex Number System

- Modeling, Data Analysis, and Function Regression
- Sequences, Series, and the Binomial Theorem

Course Format and Procedures

This course uses Inquiry-Based Learning (IBL), a pedagogy designed to engage students in the educational process. Inquiry-Based Learning is a student-centered methodology, which emphasizes the importance of the active construction of learning. Therefore, students are expected to pose questions, make decisions, design plans and experiments, discuss, collaborate, communicate results, and provide justified answers and explanations when engaged in the inquiry process.

Characteristics of an IBL classroom

- Students work together in groups to explore various mathematic concepts.
- Instructor listens to student conversation to monitor creation of mathematical ideas.
- Students present work on the document camera. This helps facilitate classroom discussion, closure to a problem, and allows for the Instructor to pose extension questions to the class.
- If a misconception occurs across the classroom the Instructor may choose to bring the class back together and pose leading questions to guide the discussions in the correct direction.

Overall Goals

- The overall goal is to have students "do" mathematics - that is, to have students engage in thinking about the connectedness that exists between various basic areas of mathematics.
- Students should work to provide rigorous arguments at different levels that support the development of these connections.
- The hope is that students will more deeply understand the discipline of mathematics and the fact that if one does not ask "why" when engaging in "doing" mathematics, then the processes experienced are strictly mechanical.

University Course Staff

Title	Description
UT Austin Faculty Lead	A UT Austin faculty member who designs and oversees delivery of the OnRamps college distance course and ensures its alignment to the course as it is delivered at the residential university campus.

OnRamps Course Staff	A UT Austin staff member and designee of the UT Austin Faculty Lead who serves as a primary subject-matter expert in the academic discipline of the OnRamps course and provides yearlong support to high school Instructors to ensure the course is delivered with fidelity. As a designee of the UT Austin Faculty Lead, Course Staff assist with academic integrity investigations, send official University communication to students, and ensure students have access to all course resources and policies.
UT Austin Instructor of Record	The UT Austin Instructor of Record grades or oversees grading of college course work and determines student eligibility and credit award. The UT Austin Instructor of Record also investigates and resolves suspected incidents of academic integrity violations in the distance college course. The UT Austin Instructor of Record meets departmental and university criteria prior to appointment. The UT Austin Faculty Lead, Course Staff, or other UT Austin-appointed staff member may also serve as the UT Austin Instructor of Record.

Course Outline

Unit	Topic
Unit 1	Thinking Like a Mathematician
Unit 2	Functions – Exam 1 covers Unit 1 & Unit 2
Unit 3	Systems
Unit 4	Matrices – Exam 2 covers Unit 3 & Unit 4
Unit 5	Quadratic Functions
Unit 6	Complex Numbers – Exam 3 covers Unit 5 & Unit 6
Unit 7	Polynomial Functions
Unit 8	Modeling and Data Analysis – Exam 4 covers Unit 7 & Unit 8
Unit 9	Rational and Radical Functions – Exam 5
Unit 10	Exponents, Logs, and *e* – Exam 6

Unit	Topic
Unit 11	Sequences and Series (not tested for the college course)

COURSE REQUIREMENTS

Technology Access and Expectations

Accessing technology is part of your OnRamps course requirements. You may only access OnRamps course technology using your own UT EID and password or other designated login credentials. You are forbidden from substituting for another person or permitting another person to use your login credentials to substitute for yourself to take a class, a test, or any class-related assignment.

Technology System	Description and Expectations
UT EID **URL:** **https://utexas.edu/eid**	• You must obtain a UT EID and password, which will create a unique account with the University of Texas at Austin, to register for OnRamps courses and access coursework. • You must create a strong UT EID password in order to ensure uninterrupted technology access. The guidelines for creating a strong password are available here. • Do not share your UT EID password with anyone. Sharing your password could allow unauthorized access to your educational information and may result in account suspension or an academic integrity investigation.
Canvas Learning Management System **URL:** **https://onramps.instructure.com**	• OnRamps provides an online learning environment in Canvas Learning Management System (LMS) for all students in this class. • You will have access to two (2) Canvas courses for the purpose of the dual-enrollment experience: the OnRamps high school course and the OnRamps college course. • You may only access Canvas using your own UT EID and password. • You are expected to access Canvas frequently for assignments and assessments. You will get many of your assignments and turn in your college work in Canvas.

Technology System	Description and Expectations
	• You are responsible for reading course information, including assignment instructions and due dates, that is posted in Canvas. • You are responsible for frequently checking your Canvas Inbox and viewing course announcements. Failure to read announcements or failure to check your Inbox is not an acceptable reason for missed communication or missed deadlines.
OnRamps Portal **URL:** **https://onramps.utexas.edu/portal**	• You will access the OnRamps Portal to manage your contact information and current OnRamps distance college course enrollment(s), including viewing your college credit eligibility status and accepting or declining college credit, if earned. You may also view prior enrollment and credit information in the OnRamps Portal. • You may only access the OnRamps Portal using your own UT EID and password. • You must use the OnRamps Portal to request accommodations for your distance college course in order for eligible IDEA, 504, or ADA accommodations to be approved and applied. You may view requested accommodations, approval status, and update accommodations at any time in the OnRamps Portal.
Email Use a personal email address that you check regularly and will have access to after you graduate high school.	• Email is an official means of communication at UT Austin. OnRamps uses the email address you provide in the OnRamps Portal to communicate enrollment and credit information to you. • It is your responsibility to keep your email address updated in the OnRamps Portal at all times. • You are expected to check email frequently in order to stay current with OnRamps-related communications, recognizing that certain communications may be time-critical. • Updating your email address in the OnRamps Portal automatically updates your email address in Canvas. Communication about your grades and course experience will be sent to you via

Technology System	Description and Expectations
	Canvas Inbox, which may be forwarded to your email address based on your Notification settings in Canvas. • Failure to check email or Canvas Inbox is not an acceptable reason for missed communication or missed deadlines.

How to Succeed in this Course

- Complete OnRamps Orientation to prepare for college expectations.
- Complete Exercises from the course, and keep an organized notebook with all of your work.
- Attend and participate in class. Collaborate and share ideas with other students in your groups as you work through the Exercises together. Also, be actively engaged during student presentations.
- Complete the Unit Learning Guides as you work through each unit. Create study guide questions and estimate your confidence for each learning objective to help prepare for college exams.
- Use Road Maps to help organize required assignment and assessment due dates for each unit.
- Complete all three rounds of the Learning Strategies modules and assessments to improve learning and studying practices with the following topics:
    - Utilizing Study Groups
    - Retrieval Practice
    - Question Prediction
    - Building Persistence with Growth Mindset
    - Setting Goals
    - Utilizing Mind Maps and Brain Dumps
- Authentically complete all College Homework Assignments within an appropriate timeline as the material is covered in class. Review responses and the immediate feedback provided to help better your understanding. Complete these according to your class pacing and before taking the exam which means these should be submitted well before the final deadline for the most benefit.
- Complete Exercise Assessments. We recommend completing these early in the 7-day window to ensure time to address unexpected issues before the deadline.
- Take all exams, including the Midterm Exam and the Final Exam. The Midterm and the Final Exam can replace the lowest exam grade for each respective semester, therefore, taking all exams gives you the best opportunity for success.
    - Learn from mistakes: When made available, review your responses to the exams and rework any missed problems. Seek help if you need further clarification.
- If you have questions on content or other course logistics, reach out to your high school Instructor as soon as possible.

- Read the student Announcements in the college Canvas course for content enrichment and course reminders.
- Manage your time. Keep track and be mindful of the due date for each assignment and assessment. Pace out your work, and dedicate time to study and complete assignments. Knowing all deadlines can help ensure you have enough time to work on assignments without feeling rushed or overwhelmed, especially if unforeseen circumstances arise.
- Check Canvas Inbox regularly and respond in a timely manner, if necessary.

Assignments & Grading

The following assignments and assessments contribute to your college grade. Detailed instructions and due dates for assignments are posted in your Canvas college course.

Assessment	Description	Frequency	Assignment Type	% Course Grade
College Exams	Summative exams assessing mastery of course content	3 Unit Exams and the Semester 1 Midterm in the Fall; 3 Unit Exams and the Semester 2 Final in the Spring	Canvas Quiz	75%
Exercise Assessments	Assessment of completion and understanding of course Exercises	3 in the Fall; 3 in the Spring	Canvas Quiz	10%
College Homework Assignments	Completion of outside-of-class practice	12 in the Fall and 12 in the Spring	Canvas Quiz	8%
Learning Strategies	Modules providing the students with different learning strategies to use through the course	3 times throughout the year; 2 in the Fall and 1 in the Spring	Canvas Modules	5%
OnRamps Orientation	Modules introducing students to OnRamps	Once	Canvas Modules	2%
Total				100%

- Late work is not allowed on assignments. Any extenuating circumstance will be reviewed on a case-by-case basis between the high school Instructor and OnRamps Course Staff.
- College Exams occur roughly once every five weeks and cover one to two units per exam. Students may not collaborate with anyone or use any notes on College Exams. Occasionally, exams will allow the use of a calculator; this excludes any calculators

that provide steps or explanations. Unless specifically stated in the exam instructions, calculators are not allowed.

- Students must only receive access codes for exams from the high school Instructor. Students must only complete exams with their high school Instructor's knowledge.
- Students who are absent for school-related reasons must take the exam within two days, before or 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 (extended absences will be reviewed on a case-by-case basis).
- Students should coordinate with their high school Instructor regarding absences.
- Unit Exercise Assessments are taken on Canvas after each College Exam. Exercise Assessments should be taken outside of class. Students are allowed to use notes and collaborate on Unit Exercise Assessments.
- College Homework Assignments are completed on Canvas throughout the academic year. College Homework Assignments are graded based on completion. Students are allowed to use notes and collaborate on College Homework Assignments.
- OnRamps Learning Strategies Modules will take place in three phases: at the beginning of the year, after the first exam, and at the beginning of the Spring Semester. These modules are graded based on completion.
- The OnRamps Orientation is taken once at the beginning of the year. The OnRamps Orientation is graded based on completion.

College Course Grading Scale

A	89.50 – 100.00	
B	79.50 – 89.49	
C	69.50 – 79.49	
D	59.50 – 69.49	*Minimum Eligibility Grade*
F	0.00 – 59.49	

- The lowest of the four Fall exam scores (Exam 1, Exam 2, Exam 3, Semester 1 Midterm) will be dropped from the college grade. The lowest of the four Spring exam scores (Exam 4, Exam 5, Exam 6, Semester 2 Final) will also be dropped from the college grade.
- The lowest two College Homework Assignments from the Fall semester will be dropped from the college grade. The lowest two College Homework Assignments from the Spring semester will also be dropped.
- The lowest Exercise Assessment from the year will be dropped from the college grade.
- Extra credit opportunities are not allowed.

COLLEGE CREDIT

This is a distance college course delivered via a dual enrollment model which means you may earn credit for College Algebra (M 301) in addition to earning high school credit.

Eligibility for the Opportunity to Earn College Credit

Eligibility refers to whether or not you meet criteria to be eligible for the opportunity to earn college credit.

You may become eligible for the opportunity to earn college credit in the following ways:

Eligibility Pathway	Requirements
College grade	Meet the minimum eligibility grade of D (59.50) on selected college assignments and assessments. All Exams, Exercise Assessments, College Homework assignments for Units 1-6, the Semester 1 Midterm, Orientation, and Learning Strategies Rounds 1 & 2 completed in the first semester contribute to your eligibility grade.
Texas Success Initiative (TSI)	Submit proof of scores on certain standardized assessments, as shown in the **Requirements for Eligiblity 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 (**prior** to February 15, 2023)	Composite and Math	23 (Composite) and 19 (Math)
ACT (**after** February 15, 2023)	Math	22

College Credit Decision Period

If you are eligible for the opportunity to earn college credit, you may accept or decline college credit earned during the five-day college credit decision period, which will occur during a Monday – Friday window after you receive your final college grade. You will receive an email notification from OnRamps when your credit decision period begins, a reminder email during the credit decision period, and an email when the credit decision period ends.

If you do not make a decision during the credit decision period, OnRamps will determine course credit as follows:

- C or above. You earned credit and *will* be issued a UT Austin transcript unless you decline credit in the OnRamps Portal.
- D. You earned credit but *will not* be issued a UT Austin transcript unless you accept credit in the OnRamps Portal.
- F. You did not earn credit and will not be issued a UT Austin transcript.

Credit Transferability & College Transcript

OnRamps recommends that you research credit transfer policies at colleges or universities you may attend in order to inform your decision to accept or decline credit at the end of the course. Each higher education institution has its own degree plan requirements and policy about whether transfer credit is factored into a student's GPA. OnRamps course grades will be factored into your cumulative GPA if you attend UT Austin as an undergraduate.

If you earn and accept college credit, you may request an official UT Austin transcript through the UT Austin Office of the Registrar. You will receive an email notification from OnRamps when your transcript is available with instructions for ordering a transcript.

POLICY INFORMATION

Students with Disabilities

If you receive high school accommodations related to a disability under the Individuals with Disabilities Education Act (IDEA) or Section 504 of the Rehabilitation Act, you may also receive certain accommodations in your OnRamps college course. Accommodations in an OnRamps course must follow accommodations in your Individual Education Plan or 504 Individual Accommodation Plan and be allowable under the university assessment practices. Accommodations are individualized and based on need and disability.

You must use the OnRamps Portal to request accommodations for your distance college course in order for eligible IDEA, 504, or ADA accommodations to be approved and applied. You must request accommodations prior to the due date for an assignment in order to access accommodations for that assignment. You are strongly encouraged to provide information about your need for accommodations during registration at the beginning of the course or immediately following changes to your Individual Education Plan or 504.

Academic Integrity

OnRamps students are subject to the University's academic integrity policies. Academic integrity is honesty in your academic work. Each student in the course is expected to abide by the University's Student Honor Code:

"As a student of The University of Texas at Austin, I shall abide by the core values of the University and uphold academic integrity."

Upholding the University's Student Honor Code means following all directions for completing each assignment and assessment. You cannot use unauthorized materials to complete assignments. You cannot substitute or allow another student to substitute for you to complete an assignment, in addition to the prohibitions on academic misconduct found in The University of Texas catalog, Chapter 11, Student Conduct and Academic Integrity: https://catalog.utexas.edu/general-information/appendices/appendix-c/student-conduct-and-academic-integrity/
To learn more about academic integrity standards, tips for avoiding a potential academic misconduct violation, and the overall conduct process, please visit the Student Conduct and Academic Integrity website at:
http://deanofstudents.utexas.edu/conduct

Statement on Generative Artificial Intelligence
Use of generative Artificial Intelligence (AI), AI-content generators (such as ChatGPT) or other unauthorized tools is a form of academic dishonesty. The UT Austin Instructor of Record or the assignment instructions will make clear for each college assignment whether collaboration is allowed and what types of tools may be utilized. Refer to the Assignments and Grading section for further details about assignment types in your course.

Communication Expectations
You must respond to messages and requests within Canvas Inbox from OnRamps staff for investigations of potential academic integrity incidents. If you fail to respond to Canvas Inbox messages about potential academic integrity incidents from OnRamps staff, you may receive an academic disciplinary action.

More information about academic integrity may be found in the OnRamps Orientation in Canvas.

Student Code of Conduct

As a participant in the UT Austin OnRamps program, you are expected to uphold a high standard of integrity and ethical behavior. This includes using UT Austin resources in an appropriate, ethical manner for the purpose of learning. Prohibited behavior includes:

- Unauthorized use of institutional technology and services
- Providing false or misleading information about an academic record
- Engaging in violent or disruptive conduct, including hazing, stalking, or behavior that impedes, interferes with, or disrupts any University teaching, research, administrative, disciplinary, public service, learning, or other authorized activity.

Failure to abide by the student code of conduct may result in an academic sanction or removal from the course. For more information about standards of behavior, refer to The University of Texas catalog, Chapter 11, Student Conduct and Academic Integrity:

https://catalog.utexas.edu/general-information/appendices/appendix-c/student-conduct-and-academic-integrity/

FERPA

All students in OnRamps are college students and subject to the federal Family Educational Rights and Privacy Act (FERPA). As a participant in the UT OnRamps program, it is important that you understand these rights as they apply to you.

Under FERPA, university staff may not share information regarding your college coursework or academic standing (grade point average, academic transcript, academic probation, or discipline records).

Exceptions:

- If you sign a waiver stating that FERPA-protected information may be released to your parent/guardian, university staff may share the FERPA-protected information with the parent/guardian.
- If university staff share FERPA-protected information with high school staff, including the high school Instructor, and you are under 18 years of age, then the high school staff may share that information with your parent or guardian.
- If university staff suspect you present a significant risk of harm to self or others, university staff may disclose FERPA-protected information with your parent/guardian, high school Instructor, principal, or other appropriate authority to ensure the safety of the student and/or other individuals.

For more information about FERPA, refer to The University of Texas catalog, chapter 9, Educational Records: https://catalog.utexas.edu/general-information/appendices/appendix-c/educational-records/