COLLEGE ALGEBRA MATH 1314.SN1
DEPARTMENT OF MATHEMATICS & STATISTICS
FALL 2025

A. COURSE & INSTRUCTOR INFORMATION

Course number/section: MATH-1314.SN1
Class meeting time: MWF 10:00-10:50 am
Class location: CS-108
Course Website: https://canvas.tamucc.edu/

Instructor: Subarna Biswas
Office location: CASA (East)
Office hours: TR 10:30 am – 12:00pm
e-mail: *subarna.biswas@tamucc.edu*

Appointments: A student may make an appointment to see me at times other than the scheduled office hours. I am available for consultation and extra help, but it is the student's responsibility to request such help. Email me to set up an appointment outside of my office hours.

B. COURSE DESCRIPTION

Catalog Course Description
3 sem. hrs. (3:0) TCCNS Equivalent: MATH 1314
Quadratic equations, inequalities, graphs, logarithms and exponentials, theory of polynomial equations, systems of equations. Counts as the mathematics component of the University Core Curriculum. Fall, Spring, Summer

C. PREREQUISITES AND COREQUISITES

Prerequisites: MATH 0310, or placement beyond MATH 0310 (a TSI score of 335 – 349 or TSIA 2.0 Diagnostics test of 6 or above); Fall, Spring, Summer.

Corequisite course required: None

D. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook/Software:
An **electronic version of the textbook** is required:
College Algebra with Corequisite Support by Ron Larson, 11th Edition (WebAssign access included) You have two options for purchasing access:
1. Through the **campus bookstore**
2. Directly via the **Canvas course link** to WebAssign

I will explain how to access and use the course materials during our **first-class meeting**.

Supplies
WebAssign **Access code** will be used in Math1314 (purchased online/bookstore at TAMUCC), pencils, erasers, dedicated notebook, and a scientific calculator. Other calculators will not be supported by the instructor.

E. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course's student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1. Interpret and simplify integral and rational exponents.
2. Use the properties of exponents to simplify algebraic expressions.
3. Use addition, subtraction, multiplication and division with order of operations to simplify monomials, binomials and polynomials.
4. Use properties to simplify radicals, including rationalizing the denominator.
5. Use property of fractions and factoring to simplify rational expressions.
6. Solve linear equations and inequalities, which include real numbers, parenthesis, multiple-terms with the variable and have conditional, no solution or infinite solutions.
7. Use factoring techniques and the zero principle or the quadratic formula to solve quadratic equations for real or complex solutions.
8. Solve inequalities and report answers as graphs, sets, or intervals.
9. Solve equations that are classified as rational, radical, or absolute value
10. Find linear, rational, radical, quadratic equations to model or solve application problems including age problems, consecutive numbers, area problems, and motion problems.
11. Represent graphically the solution(s) of equations and inequalities in one and two variables.
12. Solve systems of linear equations in two variables using elimination and substitution methods.
13. Write equations in one or two variables to solve or model application problems including mixture and motion problems.
14. Understand the relationship between the slopes of two equations and the intercepts to determine if lines are parallel, perpendicular, and identity or just intersecting.
15. Write equations for lines that are parallel or perpendicular to a given equation and pass through a specific point using point slope formula.
16. Convert from standard form to slope-intercept form and vice versa.
17. Write equations for lines in slope-intercept, point-slope and standard form given a graph, two points or a slope and point.
18. Given a graph or quadratic equations determine the x- and y-intercepts, vertex.

F. INSTRUCTIONAL METHODS AND ACTIVITIES

The instructional method is in person lectures, completing WebAssign Learning, and helping sessions during office hours. Students will use WebAssign Learning independently to complete learning assignments. At the end of the semester, students will show competency by passing all assignments, quizzes, tests, and the final exam with an overall score of 70% or better.

G. MAJOR COURSE REQUIREMENTS AND GRADING

The student learning outcomes described in Section F will be measured via progress on homework, quizzes, tests and the final exam. Every problem with the homework can be solved multiple times. There is no reason not to obtain a good grade on every homework assignment. Doing so will strengthen your performance on quizzes and tests. The homework will be open all semester. It is strongly recommended that you complete the homework for a

section or chapter prior to the quiz and the exams. The final exam is comprehensive and is written by the Mathematics Department. All students will take a common final exam. I do expect you to remember all concepts that I teach as noted on this syllabus.

ACTIVITY	% OF FINAL GRADE
Participation & Recitation	10
WebAssign Homework	15
Quizzes (WebAssign or in Class)	10
Three Semester Exams	45
Final Exam (Comprehensive)	20

Grades will be assigned according to the following scale. **Class participation** will be evaluated based on **attendance** and the **quality of your responses** during in-class activities. For **essay-type questions** and **presentations**, the following **rubric** will be used to assess performance:

Category	**4 Exemplary**	**3 Good**	**2 Satisfactory**	**1 Unsatisfactory**
Subject knowledge 50%	Demonstrates subject knowledge throughout the entire assignment. All information is clear, appropriate, and accurate. The solutions to all problems are correct.	Demonstrates subject knowledge most of the time. Most of the information is clear, appropriate, and accurate. Most of the solutions to problems are correct, some solutions have minor errors.	Demonstrates some subject knowledge. Some information is clear, appropriate, and accurate. Some solutions to problems are correct.	Subject knowledge is not demonstrated. Information is confusing, insufficient, inappropriate, and inaccurate. Most of the problems have incorrect solutions.
Organization 30%	The sequence of information/proof is logical and well organized.	The sequence of information/proof is well organized.	Some parts of the sequence of information/proof is organized.	The sequence of information/proof is disorganized.
Communication (written and/ or oral presentation) 20%	Excellent written communication of ideas/ excellent integration of spoken and visual presentation.	Good written communication of ideas, most of the time/good integration of spoken and visual presentation, most of the time.	Some parts are well written, and ideas are communicated effectively / some parts of the presentation are coordinated orally and visually.	The written paper is hard to follow, ideas are not communicated effectively / the presentation is hard to follow, the spoken and visual presentation are not integrated.

Grades will be assigned according to the following scale.

A – 90%-100%	B - 80%-89.99%	C – 70%-79.99%	D – 60%-69.99%	F - below 60%

H. COURSE CONTENT/SCHEDULE:

WEEK	SECTIONS	TOPICS
1		Syllabus Discussion and Prerequisite
1	1.1	Graphs of Equations
2	1.2	Linear Equations in One Variable
2	1.3	Modeling with Linear Equations
2	2.1	Linear Equations in Two Variables
3	2.2	Functions
3	2.3	Analyzing Graphs of Functions
4	2.4	A Library of Parent Functions
4	2.5	Transformations of Functions
4	2.6	Combinations of Functions: Composite Functions
5	2.7	Inverse Functions
		EXAM 1 (1.1~1.3 & 2.1 ~2. 7)
6	1.4	Quadratic Equations and Applications
6	1.6	Other Types of Equations
7	1.7	Linear Inequalities in One Variable
7	1.8	Other Types of Inequalities
8	3.1	Quadratic Functions and Models
8	3.2	Polynomial Functions of Higher Degree
		EXAM 2 (1.4 ~ 1.8 & 2.6 ~2.7 & 3.1 ~3.2)
9	4.1	Rational Functions and Asymptotes
9	4.2	Graphs of Rational Functions
10	5.1	Exponential Functions and Their Graphs
10	5.2	Logarithmic Functions and Their Graphs
11	5.3	Properties of Logarithms
12	5.4	Exponential and Logarithmic Equations
12	5.5	Exponential and Logarithmic Models
13	6.1	Linear and Systems of Equations: Substitution/Applications
14	6.2	Linear and Systems of Equations: Elimination/Applications
14		**EXAM 3 (4.1 ~6.2)**
14		**Thanksgiving break**
15		**FINAL EXAM REVIEW**

15		**COMMON FINAL EXAM- SATURDAY December 6th @ 11:00 AM-1:30PM**

Important Dates

Labor Day Holiday-Campus Closed – September 1
Last Day to Drop – November 7
Reading Day-No Class – November 26
Thanksgiving Holiday-Campus Closed – November 27-28
Last day of classes – December 3
Reading day -No Class – December 4

Note: Changes to this course schedule may be necessary and will be announced to the class by the instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

I. COURSE POLICIES

Attendance/Tardiness
Attendance is mandatory by Texas A&M University. Every class a new topic is covered, and any material that is missed could affect your progress. If you must miss, please make sure that you get the notes from someone. Also, you are responsible for what is due that week when you are absent. Assignments are available 24 hours per day for the entire week it is due. There will be no excuses for missing assignments unless it is an absolute emergency with documentation. Attendance will be taken at every class. Good attendance (no more than two absences) will help me to determine borderline grades (an 89 can be rounded up to a 90 and so on). The instructor is NOT responsible for informing absent students what was covered in previous classes, homework, or any other announcements.

Cell Phone/Food
ABSOLUTELY NO CELL PHONE, NO FOOD IN THE CLASSROOM. NO EXCEPTIONS. See cell phone usage contract for more information. Any student using his/her cell phone/eating food in class will automatically get 10% deduction for the next exam (whichever that may be). If the problem persists, the student will receive a letter grade deduction for that exam. If an emergency scenario arises and the student must use a phone, let the instructor know of the situation.

Laptop Use
Laptops and tablets are permitted in class **only for note-taking purposes**. Class time is not to be used for doing homework or assignments from this or other courses. Non-academic use of devices may result in loss of device privileges.

Extension Policy: You have 1 automatic extension per Homework (with 10% of total score). If you miss a homework assignment, you can request an extension through the system. The extension must be requested and will be granted automatically, but it must be done by the day of class, which is December 3rd. No other extension will be granted.

Exams Policy
Three semester exams will be administered in class. Specific dates will be posted on Canvas under the "Announcements" section. These dates are subject to change with advance notice announced during class. Calculators are required for all exams. Cell phones may not be used as calculators, and

calculators may not be shared during exams. If you arrive at any exam after the first person has completed the exam and left the room, you will not be allowed to take the exam.
The **final exam** is **comprehensive**, covering all material from the semester. It will also be administered **in class** and is **mandatory**. **If the final exam is not taken**, a **score of zero** will be recorded for the 20% final exam weight in the final grade. The **lowest score** among the three semester exams will be **replaced by the final exam score**, **only if the final exam score is higher**. This policy also applies to **only one missed exam**—the missed test score will be replaced by the final exam score.

Late or Missed Exam & Quizzes
No makeup exam will be given because the final exam can replace one missed exam. The exception can be made only with written evidence of an official University excused absence. For an absence to be considered excused, the student must notify his or her instructor in writing (an acknowledged e-mail message is acceptable) before the date of absence if such notification is feasible. In cases where advance notification is not feasible (e.g. accident or emergency), the student must provide notification by the end of the second working day after the absence. In the case of illness or injury, students are required to obtain a confirmation note from a healthcare professional affirming the date and time of a medical office visit regarding the illness or injury.

Extra Credit
If an extra credit work is assigned, or extra points are given, the total score should not exceed 100%.
No points will be "saved" toward the next examination.

Participation
Students are encouraged to participate in online discussions and problem-solving skills.
Participation is not part of the grade, but you learn more by interacting than by watching passively.

Student Safety Trainings
If the course requires safety training(s) and/or lab safety seminar(s), these must be successfully completed once every academic year, normally in the Fall. Students will be required to take the training from Canvas in either the first lecture or first lab and show the certificate of completion before the end of the class/lab. Students who are still covered by having taken the safety training earlier in the academic year should show their certificate of completion. For students unable to attend the first day of class/lab, a reasonable completion date will be flagged in Canvas. A possible grade penalty can be enforced for non-completion.

J. UNIVERSITY & COLLEGE POLICIES

For information on:

- Campus Emergencies
- Statement of Academic Continuity
- Academic Integrity/Plagiarism
- Classroom/Professional Behavior
- Statement of Civility
- Civil Rights Reporting
- Disabilities Accommodations
- Mental Health and Well-Being Services
- Academic Advising
- Dropping a Class
- Student Grade Appeals
- Copy of Academic Calendar

Please visit https://www.tamucc.edu/science/student-information/syllabi-policies.php or scan:

K. AI PERMISSION/PROHIBITION STATEMENT

Prohibit AI

We recognize that various AI tools are available to assist with different tasks. It must be underlined that these are not a substitute for human knowledge, logic, and critical thinking. As our class focuses on developing a foundational understanding of computing and programming, using such tools cannot contribute positively to your skills. Therefore, using AI tools to get academic credit is prohibited in this class, and any violation will be considered a breach of TAMU-CC's Student Code of Conduct.

The use of artificial intelligence (AI) or other automated writing tools to complete assignments is strictly prohibited in this class. Any evidence of the use of AI will be considered a violation of academic integrity and will be met with a failing grade for the assignment and may result in further disciplinary action. It is the responsibility of each student to ensure that all work submitted for this class is their own original work, written and completed without the use of AI or other automated writing tools.

Respect for yourself and your education: I will strongly enforce the University's academic misconduct policies (for more information see section on academic misconduct). Collaboration or discussion about individual assignments with other persons, artificial intelligence, websites, or applications other than your instructor or other persons/materials approved by your instructor is considered cheating. As part of your introduction to the course, you will complete the CITI Plagiarism Training Module— more information on this is located on the course Blackboard site. Sharing of course content or materials may also result in copyright infringement and will be considered a breach of academic conduct.

The intent of academic integrity is to present your own original work on all assignments. Examples of Academic Integrity Violations include, but are not limited to, the following:

Copying and pasting from the internet, without attribution,

Copying and pasting from the textbook or other sources, without attribution,

Using Artificial Intelligence applications to write, enhance, or alter your exam or assignment,

Using Grammarly Go to write, enhance, or alter your exam or assignment,

Forwarding your exam or assignment to another person for review and/or alteration,

Paying a person, organization, or website to originate, review, write, or contribute to your exam or class assignment,

Using unauthorized materials while taking an exam,

Discussing an individual exam or assignment with another when not permitted, and

Assisting another student by any of these means.

Students may not use ChatGPT or any other similar generative AI tool programs to write any course assignments. Assignment files uploaded to Turnitin are checked for the likelihood of being written with an AI program. Any student assignment Turnitin reports to be likely prepared by an AI program will be uploaded to ZeroGPT or a similar program. If that program likewise identifies the assignment as likely prepared by an AI program, the assignment will receive a zero score.

Special Note: If the instructor suspects that a student engaged in academic dishonesty, cheating, and/or plagiarism for any of the course's assessments involving the use of third party individuals, groups, or technology (e.g., unpaid outsourcing, traded goods or services, paid goods or services, artificial intelligence and related machine learning systems, programs, software, applications/apps, etc.), the student will be required to have an in-person oral defense of the subject matter, content, format, resources, etc. with the instructor and another university faculty member or administrator present to determine the veracity and reliability of the student's work and mastery of material. Based on the results of the oral defense, consequences for academic dishonesty, cheating, and plagiarism include, but are not limited to, a failing grade for an assignment, a failing grade for the course, noncredit for an assignment, additional work, and/or direct referral to university officials.

L. GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.