BRIEF DEVELOPMENTAL MATHEMATIC MATH 0214.SN1
DEPARTMENT OF MATHEMATICS & STATISTICS
FALL 2025

A. COURSE & INSTRUCTOR INFORMATION

Course number/section: MATH-0214.SN1   **Instructor:** Subarna Biswas
Class meeting time: MWF 10:00-10:50 am   **Office location:** CASA (East)
Class location: CS-108   **Office hours:** TR 10:30am-12:00pm
Course Website: https://canvas.tamucc.edu/   **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

Brief Developmental Mathematics (2 semester hours). Topics as in MATH 0310. For students who have completed most topics in MATH 0300. (Not counted toward graduation)

Extended Course Description

This course is paired with MATH 1314. You must be enrolled in one of the MATH 1314.SN1 to be in this class.

C. PREREQUISITES AND COREQUISITES

Corequisites:

MATH 1314.SN1 Enrollment on **both courses** is required.

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**.

Note: You do **not** need to purchase two separate access codes. If you purchase the **College Algebra WebAssign access**, it will also include access for **MATH 0214 (the corequisite course)**.

Supplies

WebAssign Access code will be used in both Math1314 and Math0214 (purchased online), pencils, erasers, dedicated notebook, and a scientific calculator. Other calculators will not be supported by the instructor.

E. <u>STUDENT LEARNING OUTCOMES AND ASSESSMENT</u>

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. <u>INSTRUCTIONAL METHODS AND ACTIVITIES</u>

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 competence by passing all assignments, 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 in the homework can be worked 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
Three Semester Exams	45
Final Exam (Comprehensive)	30
Homework	25

Grades will be assigned according to the following scale.

DA – 90%-100%	DB - 80%-89.99%	DC – 70%-79.99%	DF – 60%-69.99%	DF - below 60%

To pass this course, one of the following conditions must be met:
- The weighted score is greater than 69.99%, or
- The final exam score is greater than 69.99%, or
- The weighted score in MATH 1314 is greater than 59.99%.

H. COURSE CONTENT/SCHEDULE

Week	MATH 0214 Brief Developmental Mathematics
1	Worksheet 1 - Operations with Fractions
1	Worksheet 2 - Problem Solving with Percent
1	Worksheet 3 - Exponents and Properties of Real Numbers
2	Worksheet 4 - Integer Exponents and Scientific Notation
2	Worksheet 5 - Simplifying Algebraic Expressions
2	Worksheet 6 - Writing and Evaluating Algebraic Expressions
3	Worksheet 7 - Adding and Subtracting Polynomials
3	Worksheet 8 - Multiplying Polynomials: Special Products

4	TEST 1 – OPERATION WITH FRACTION, POLYNOMIALS AND EXPONENTS
4	Worksheet 9 - Factoring Polynomials with Common Factors 1: The GCF
5	Worksheet 10 - Factoring Polynomials with Common Factors 3: Factoring by Grouping
5	Worksheet 11 - Factoring Trinomials of the Form (w/1 variable)
6	Worksheet 12 - Factoring Trinomials in Two Variables
6	Worksheet 13 - Factoring Polynomials with Special Forms
7	TEST 2 – FACTIORING
8	Worksheet 14 - Rational Expressions and Functions domain & simplify
8	Worksheet 15 – Multiplying Rational Expressions
9	Worksheet 16 - Dividing Rational Expressions
9	Worksheet 17 - Add/Subtract Rational Expressions
10	Worksheet 18 - Radicals and Rational Exponents
10	Worksheet 19 - Simplifying Radical Expressions
11	Worksheet 20 - Adding and Subtracting Radical Expressions
11	Worksheet 21 – Multiplying/Dividing Radical Expressions
12	TEST 3 – RATIONAL AND RADICAL EXPRESSIONS
13	**FINAL EXAM -TBA**

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 required and every class will be taken. Students are expected to attend weekly meetings and ask questions about the chapters for the week. The instructor is NOT responsible for informing absent students what was covered in previous classes, homework, or any other announcements.

Cell Phone/Food

There is absolutely no cell phone in the class. No Food. No exceptions. <mark>Any student using his/her cell phone/ eating food in class will automatically get 10% deduction for the next exam</mark> (whichever that may be). If the problem persists, the student will receive a letter grade deduction for that exam.

Laptop Use

<mark>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.</mark>

Extra Credit

If extra credit work is assigned, or extra points are given, the total score should not exceed 105%. No points will be "saved" toward the next examination.

Late or Missed Exam, Homework (worksheet)

There will be no makeup for a missed semester exam and homework unless for special circumstances. In addition, there is a 10% penalty for late homework. You have *1 automatic extension per assignment*. The <mark>**deadline to view all homework & Quizzes is November 25th by 11:59 PM**</mark>. Finally, there will be no makeup for a missed final exam, it must be taken per schedule.

Extension Policy

You have 1 automatic extension per assignment (with 10% of total score). If you miss an 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 before the final exam, which is November 25th. 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. 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 30% 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.

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

Required safety training and/or lab safety seminars must be successfully completed once every academic year, normally in the Fall. Students will be required to take the course from Canvas in either the first lecture

or first lab to complete their training assignments and show the certificate of completion before the end of the class or lab. Students who are still covered by having taken the safety training earlier should show their certificate of completion. For students unable to attend the first day of class/lab (or still registering for the class), a reasonable completion date will be flagged in Starfish. 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.