Note: This course satisfies Area A2 of the Core Curriculum.

COURSE INSTRUCTOR
Instructor: Nathan Rehfuss
Carrollton Office: 111A Boyd Hall
Newnan Office: 116 Newnan Center
Email: nrehfuss@westga.edu

OFFICE HOURS

Carrollton (111A Boyd): Tuesday, 9:15 am-11:10 am and 12:45 pm-1:50 pm
Newnan (116 Newnan Center): Wednesday, 12:30 pm-2:30 pm

Please feel free to drop by during any of the above times; you do not need an appointment. If you'd like to meet with me at any other time, email me and we can set up a meeting.

REQUIRED COURSE MATERIALS

TEXT: *College Algebra and Trigonometry, Abramson, Openstax.* You can download the textbook for free at https://openstax.org/details/books/algebra-and-trigonometry.   You should go to "Download a PDF" and download the High Resolution version.

I strongly recommend you purchase a scientific or graphing calculator. The TI-30, TI 36, Casio 115, and Casio 991 are good contenders in the budget range. The TI-84 is the strongest graphing calculator allowed. The TI-89 and Nspire are **not** allowed on tests at UWG, nor is any other calculator with a computer algebra system. You can check out calculators from Ingram Library on the Carrollton campus if necessary.

Course Description
 This course is a functional approach to algebra that incorporates the use of technology. Emphasis will be placed on the study of functions, and their graphs, inequalities, and linear, quadratic, piece-wise defined, polynomial, rational, exponential and logarithmic functions. Appropriate applications will be included.

Learning Outcomes
Students should be able to demonstrate:
1. Express relationships using the concept of a function and use verbal, numerical, graphical and symbolic means to analyze a function.
2. Model situations from a variety of settings by using polynomial, exponential and logarithmic functions.
3. Manipulate mathematical information, concepts, and thoughts in verbal, numeric, graphical and symbolic form while solving a variety of problems which involve polynomial, exponential or logarithmic functions.
4. Apply a variety of problem-solving strategies, including verbal, algebraic, numerical, and graphical techniques, to solve multiple-step problems involving polynomial, exponential, logarithmic equations and inequalities and systems of linear equations.

5. Shift among the verbal, numeric, graphical and symbolic modes in order to analyze functions.
6. Use appropriate technology in the evaluation, analysis and synthesis of information in problem-solving situations.

In addition, since this course satisfies Area A2 of the Core, upon successful completion of the course:

- Students demonstrate a strong foundation in college-level mathematical concepts and principles.
- Students demonstrate the ability to apply symbolic representations to model and solve real-world problems.

COURSE ASSESSMENT

Your homework for this class is online at myopenmath.com. Create an account, then enter course code **62490**. Leave the Enrollment Key blank. All homework is due at midnight on the next class day following the lecture for that section. You are given five LatePasses for the semester: if you do not complete a homework assignment on time you can use a LatePass to reopen it for 48 hours. Take care not to click the LatePass button more than once, or you may waste multiple LatePasses. (If this happens send me an email and I can restore your passes.)

In addition to the online homework, you are expected to read the corresponding section in the textbook before each lecture. You will take a short quiz at the beginning of each lecture to demonstrate that you have read the textbook. Please consult the calendar on Courseden to see which sections you should read ahead of each class.

You can earn up to 5% extra credit by studying in the Math Tutoring Center at a rate of 0.5% per hour. Print a tutoring hours log from Courseden and have your tutor sign it after each section, then turn it in to me any time up until the final exam.

You will take four unit tests this semester. I will drop the lowest of your four unit test grades. These tests are free response.

The final exam is cumulative and will be multiple choice.

ASSESSMENT GRADING:

Homework:	30%
Reading Quizzes:	10%
Unit Tests:	35%
Final:	25%

Grading Scale:

[89%, ∞):	A
[79%, 89%):	B
[69%, 79%):	C
[59%, 69%):	D
[0%, 59%):	F

OTHER COURSE INFORMATION

If you know you cannot attend an exam, contact me at least 48 hours in advance and we may be able to make alternate arrangements. Otherwise no make-up tests will be given. Make-up reading quizzes are not given under any circumstance.

To ensure confidentiality and timely response, all course-related email must originate from a westga.edu account and be addressed to my westga.edu email. **Do not** message me on CourseDen or MyOpenMath – I will not see these messages.

COURSE POLICIES AND INFORMATION
University Policies and Academic Support
Please carefully review the following Common Language for all university course syllabi at the link:

https://www.westga.edu/UWGSyllabusPolicies/

It contains important material pertaining to university policies and responsibilities. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

Academic Honesty
Quizzes and exams are closed-book, closed note, individual assessments. Any attempt to cheat using notes, books, or communication with other students or outside sources will result in a grade of 0 and a report to school administration. Any use of a phone or smart device during an exam is considered cheating. Cheating a second time will result in failing the course. Cheating on the final exam will result in failing the course.

You are encouraged to work with other students on homework and test review.

Definitions of academic dishonesty are defined in the student handbook:
www.westga.edu/handbook/

Disabilities Act/Accessibility for the Course
If you are a student whom is disabled as defined under the Americans with Disabilities Act and require assistance or support services, please notify me and provide me with a copy of your packet from Student Services. The university will provide you with resources for any audio/visual needs that you may have with the learning management system or course content. Please contact UWG Accessibility Services for more information.

Student Conduct
You are expected to abide by the guidelines detailed in the university catalog. Respect and courtesy are required of all students while in the classroom. **Silence all electronic devices** and respect your classmates by refraining from activities that might distract them.

Resources for Success
The University makes several additional resources available to you to help ensure you succeed this semester.

Center for Academic Success – Call 678-839-6280 or email cas@westga.edu to make an appointment. The CAS offers course-specific tutoring as well as help with studying skills.

Math Tutoring Center – Located in Boyd 205, the MTC is a computer lab staffed with tutors who can help you study or do homework. You do not need an appointment – just walk in and swipe your student ID. The MTC is open 9AM-7PM M-Th and 9AM-3PM Fri. Bring a MTC attendance form and have a tutor sign it to receive up to 5% extra credit in this class. You will receive 0.5% extra credit for each hour spent working in the MTC.

Counseling Center – If you are affected by stress, depression, anxiety, or other mental health concerns, UWG has counselors available to help. You can visit 123 Row Hall during business hours or call 678-839-6428 at any time for help.

COURSE OUTLINE

Section	Title
1.2	Exponents and Scientific Notation
1.3	Radicals and Rational Expressions
1.4	Polynomials
1.5	Factoring Polynomials
1.6	Rational Expressions
2.1	The Rectangular Coordinate System and Graphs
2.2	Linear Equations in One Variable
2.3	Models and Applications
2.4	Complex Numbers
2.5	Quadratic Equations
2.6	Other Types of Equations
2.7	Linear Inequalities and Absolute Value Inequalities
3.1	Functions and Function Notation
3.2	Domain and Range
3.3	Rates of Change and Behavior of Graphs
3.4	Composition of Functions
3.5	Transformation of Functions
3.7	Inverse Functions
4.1	Linear Functions
4.2	Modeling with Linear Functions
5.1	Quadratic Functions
5.2	Power Functions and Polynomial Graphs
5.3	Graphs of Polynomial Functions
5.4	Dividing Polynomials
5.5	Zeros of Polynomial Functions
6.1	Exponential Functions
6.2	Graphs of Exponential Functions
6.3	Logarithmic Functions
6.4	Graphs of Logarithmic Functions
6.5	Logarithmic Properties
6.6	Exponential and Logarithmic Equations
6.7	Exponential and Logarithmic Models
11.1	Systems of Linear Equations: Two Variables

IMPORTANT DATES:

First Day of Class:	Tuesday, Jan. 7
Drop Ends:	Friday, Jan. 10
Last Day to Withdraw with a W:	Saturday, Feb. 28
Last Day of Class:	Thursday, April 23
Final Exam:	Tuesday, May 5, 8:00 am-10:00 am
No classes:	Monday, March 16 – Friday, March 20 (Spring Break)

The following unit test dates are tentative and subject to change:

Test 1:	Thursday, Jan. 23
Test 2:	Tuesday, Feb. 18
Test 3:	Thursday, March 12
Test 4:	Tuesday, April 21