UNIVERSITY OF NORTH GEORGIA SYLLABUS
COLLEGE OF SCIENCE AND MATHEMATICS – DEPARTMENT OF MATHEMATICS
MATH 1111 [COLLEGE ALGEBRA]

Semester:	Spring 2025 (Online)	
Instructor:	Thomas Hartfield	
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In Person Office Hours:	Monday and Wednesday afternoons	2:00 pm – 5:15 pm
for Student Assistance:	*(I may be unavailable in the last five minutes of each hour)*	
Dedicated Online	Tuesdays 10:30 am – 11:30 am	Using Zoom through D2L
Meetings for MATH 1111:	*(excluding Spring Break)*	

Note 1: Additional online meeting opportunities available by request.
Note 2: Additional online meetings will be scheduled the weeks of Midterm and Final.
Note 3: Emails will always receive a response within 24 hours on weekdays, except during Spring Break.

First Day for Withdrawal (W): Friday, 17 January 2025 after 3:00 pm
Add/Drop & Late Registration possible (no grade or withdrawal required) to this point.

Last Day for Withdrawal (W): Friday, 21 March 2025 before 11:59pm
After this date a withdrawal will receive a "WF" unless a dean gives specific approval.

Exam Dates:

Midterm: The week of 17 March 2025 – 21 March 2025: Choose One
- Wednesday, 19 March at 5:30pm in Watkins 135 (GC)
- Thursday, 20 March at 10:20am in Watkins 135 (GC)
- Thursday, 20 March at 3:00pm in Watkins 135 (GC)

Final: The week of 5 May 2025 – 9 May 2025: Choose One
- Wednesday, 7 May at 5:30pm in Watkins 135 (GC)
- Thursday, 8 May at 10:20am in Watkins 135 (GC)
- Thursday, 8 May at 3:00pm in Watkins 135 (GC)

See page 4 for more details.

Required Materials in eLearning by D2L:
1. Instructor Notes: Guided Notes and Videos
2. Online Access: WebAssign for Algebra & Trigonometry
   This class uses First Day Inclusive access for your course materials. Students may choose to opt-out but must be able to access WebAssign for the duration of the term. You are strongly discouraged from opting out.
3. Textbook: Algebra & Trigonometry, 4e, by Stewart, Redlin, & Watson

Methods of Instruction: Online, fully at a distance instruction. Asynchronous instruction through eLearning.
- Instructional videos will be posted within modules with Guided Notes.
- Additional Practice is available on D2L and via textbook.
- Homework and quizzes will be completed in WebAssign.
- Discussion responses will be posted at D2L.
- The midterm and final *must* be taken on the Gainesville Campus with the instructor.

Tech Requirements:
- A TI-84+ or a graphing calculator at a level equivalent to a TI-84+
- A personal computer (or technological device) with internet access
- A webcam (if your personal computer does not have one built in) is recommended but not required.

Regular Course Format: The course will consist of seven two-week phases, a week reserved for the midterm exam, and final exam week.

For each two-week phase, students will be assigned a collection of topics (between four and six) with information delivered via instructional videos. Additional practice exercises will be paired with this content for student practice. Students will complete a homework assignment for each topic, participate in the phase's discussion board, and then conclude the phase with a quiz. Phases ends on alternating Saturdays at 12noon.

Students may work ahead in the four phases before Spring Break and then the three phases after Spring Break but must contribute to the discussion forums during each scheduled phase period. Penalties will be assessed for late homework and quizzes.

Attendance Policy: UNG requires that all students complete a Mandatory Attendance Quiz and a Mandatory Introduction Discussion during the first two weeks of the course. **Students failing to complete both assignments are automatically withdrawn from the class.**

Students are expected to stay current for all seven phases over the course of the semester. The first time a student does not attempt any work required for a phase, the student will be contacted via email (and possibly through other means). A second phase without work completed will result in the student being notified that they will be withdrawn from the course. Students will have two workdays to respond to the email. Students who request to remain in the course after notification will not be withdrawn; however, if the student fails to attempt work in a third phase, the student will be promptly withdrawn without advanced notice.

Course Calendar:

Phase	Phase Title	Phase Start	Phase Completion
1	Basic Review & Relations	Mon, 13 January at 12:01 AM	Sat, 25 January at 12:00 Noon
2	Introduction to Functions	Sun, 26 January at 12:01 AM	Sat, 8 February at 12:00 Noon
3	Working with Functions	Sun, 9 February at 12:01 AM	Sat, 22 February at 12:00 Noon
4	Linear & Quadratic Functions	Sun, 23 February at 12:01 AM	Sat, 8 March at 12:00 Noon
MIDTERM EXAM		See Page 1: Either 19 or 20 March	
5	Polynomial & Rational Functions	Sun, 23 March at 12:01 AM	Sat, 5 April at 12:00 Noon
6	Inverses, Exponentials, Logarithms	Sun, 6 April at 12:01 AM	Sat, 19 April at 12:00 Noon
7	Logarithmic & Exponential Equations	Sun, 20 April at 12:01 AM	Sat, 3 May at 12:00 Noon
FINAL EXAM		See Page 1: Either 7 or 8 of May	

Course Description: Topics include algebraic and absolute value equations and inequalities; piecewise defined, polynomial, rational, exponential, and logarithmic functions with their graphs and applications; and systems of equations. This course is designed to prepare students for MATH 1113 (Precalculus) or MATH 2040 (Brief Calculus); students in majors that do **not** require these courses are encouraged to take MATH 1001 (Quantitative Skills and Reasoning) or MATH 1101 (Mathematical Models)
Credit: 3 hours.
Prerequisite: Regular placement or MPI score of 1300 or higher

Course Objectives: After completion of the course the student will be able to:

- Determine if numeric, algebraic, and graphical representations are functions.
- Combine linear, quadratic, cubic, constant, absolute value, cube root, and square root functions to find a new composite function through addition, subtraction, multiplication, division and composition using numeric, algebraic, and graphical representations.
- Determine the domain of parent functions and write the domain using interval notation.
- Determine the domain of a new function created from composition or operations.
- Evaluate a function and interpret the meaning in context.
- Make connections between transformations, which include vertical and horizontal shifts, vertical (only) stretches and compressions, and reflections using various representations.
- Find the midpoint and distance of a line segment and interpret the meaning in context.
- Identify the domain of piecewise functions, graph and evaluate piecewise functions in context involving linear, quadratic, cubic and square root functions.
- Write an equation of a linear function in slope-intercept form and determine the slope and x- and y-intercepts within an application using numeric, graphic and algebraic representations.
- Solve absolute value equations and inequalities.
- Evaluate absolute value functions within an application.
- Solve quadratic equations by factoring, using the square root property, quadratic formula, & graphing.
- Analyze quadratic functions in context and interpret the domain, range, vertex and (real) zeros using algebraic and graphic representations.
- Identify characteristics of a polynomial in graphic form, including extrema, increasing and decreasing intervals, and end-behaviors of polynomials.
- Use the remainder and factor theorem, long and synthetic division to identify roots and multiplicity of roots in polynomials.
- Identify the solution of rational equations algebraically (up to quadratic equivalence) and verify the existence of derived solutions.
- Graph rational functions.
- Identify intercepts, horizontal and vertical asymptotes both algebraic and graphic representations.
- Find the inverse algebraically and by reflecting the function over the line $y = x$.
- Determine if a function is one-to-one by examining a graph, table, or set of ordered pairs.
- Apply an inverse function and explain its meaning in the context of a given situation.
- Analyze an exponential function in context and interpret the initial value, growth rate, and asymptotes.
- Find the inverse of an exponential function.
- Solve equations based on the definition of exponential and logarithmic functions.
- Solve exponential and logarithmic equations by using the definition and properties.
- Interpret exponential and logarithmic equations and solutions in applications.
- Solve a two-by-two system of equation for two unknowns and interpret the solution in context.

Core Curriculum Info: This is a Core IMPACTS course that is part of the Mathematics area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I measure the world?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will apply mathematical and computational knowledge to interpret, evaluate, and communicate quantitative information using verbal, numerical, graphical, or symbolic forms.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Information Literacy
- Inquiry and Analysis
- Problem-Solving

Homework Information: Each topic will have a homework assignment of varying length and value. These questions correspond to the material in the weekly topic as covered in the videos and supported by the additional practice exercises. Questions are completed individually and built-in aids (such as "show me an example") are available. There is no time limit on each question or each assignment within the given phase. The average of all homework assignments for the course will constitute 26 percent of the course grade.

Quiz Information: Each week will include one timed quiz on the weekly content. Students will have 90 minutes per quiz attempt and must answer all questions during that window; breaks are not allowed (once time starts, it cannot be stopped). Students will have three attempts on each exercise to submit all of the correct answers for the problem. Students can use any resources available to you *except for* assistance from other individuals (inside or outside the class) and computerized solving programs. The average of the highest six quiz scores will constitute 15 percent of the course grade.

Discussion Information: During each phase, students are required to either post a content-focused question to the discussion board for that phase or answer a question from another student or the instructor. Questions and responses should be meaningful to the topic at hand, with substance that either identifies an issue of concern or a way to possibly resolve that concern. It is in the instructor's sole discretion whether a student's contribution meets that threshold. Credit will be awarded from each of the seven phases to constitute 7 percent of the course grade.

Exam Information: A midterm exam and a final exam will be given in-person, on paper, for this class (these are the only mandatory activities that must be done synchronously on campus.)
Each will be given on the Gainesville Campus in the Watkins Building, room 135, with students choosing from three time slots that work best in their schedule.

- Midterm specifics:
  - The choice of start times for the exam will be (you only must be present for one):
    - Wednesday, 19 March at 5:30pm,
    - Thursday, 20 March at 10:20am,
    - Thursday, 20 March at 3:00pm.
  - The exam will last a maximum of 100 minutes.
  - The exam will be a collection of 10 to 15 multi-part exercises from phases 1-4.
  - No make-up of the midterm will be offered; students failing to take the midterm will be given a modified final exam (with additional questions) that counts for both the mid-term and the final exam.
  - The grade on the midterm exam is worth 20% of the course grade.
- Final specifics:
  - The choice of start times for the exam will be (you only must be present for one):
    - Wednesday, 7 May at 5:30pm,
    - Thursday, 8 May at 10:20am,
    - Thursday, 8 May at 3:00pm.
  - The exam will last a maximum of 120 minutes.
  - The exam will be a collection of 15 to 20 multi-part exercises from any of the seven phases, but slightly weighted towards phases 5-7.
  - Students failing to take the final exam must request an excused absence via the Office of the Dean of Students (https://ung.edu/dean-of-students/index.php) by no later than Friday, 9 May at 12:00noon. Resolutions to an approved excused absence will be handled on a case-by-case basis and may consist of either a late exam before the grading deadline or an incomplete for the course.
  - The grade on the final exam is worth 32% of the course grade.

Academic Integrity:

Academic honesty is highly valued at UNG. "Academic honesty" means performing all academic work without plagiarism, cheating, lying, tampering, stealing, giving or receiving unauthorized assistance from any person, or using a unique source of information without properly acknowledging the source. "Academic dishonesty" means performing, attempting to perform, or assisting any other person in producing academic work that does not meet this standard of academic honesty.

During an exam it is unacceptable to take, give, or receive aid of any type from another student. It is also inappropriate to use any electronic device, including a mobile phone, during an exam that has not been preapproved by the instructor. A TI-83/TI-84 calculator (or model with fewer functions) is approved for use during tests and exams.

A student who acts in an academically dishonest manner during an exam will receive a zero for the exam in question and be referred to the academic integrity process at UNG. Additional consequences may result from this process, up to, and including suspension or expulsion from the university.

Communication Expectations:

Through all communications, either by email or in discussion groups, please be respectful to everyone. General rules of thumb:

- Write maturely; correspondence can be informal but it should not be childish.
- Be kind and courteous to all.
- In discussions, treat other students and the instructor with respect: do not use all caps and avoid profanity and degrading remarks.
- In public forums, avoid sharing excessively personal details or contact information.

A summary of good practices on communicating online is available at Discussion Board Netiquette.

Additional Resources:

1. Library Resources:
   - ***Schaum's*** easy outlines. Calculus: based on ***Schaum's*** Outline of differential and integral calculus by Frank Ayres, Jr. and Elliot Mendelson [computer file] / abridgement editor, George J. Hademenos.
   - Dunham, *The Mathematical Universe: An Alphabetical Journey Through the Great Proofs, Problems, and Personalities*, Wiley & Sons, New York, 1994.
   - *Multicultural and Gender Equity in the Mathematics Classroom: The Gift of Diversity* (Janet Trentacosta & J. Kenney, Eds., NCTM, 1997)
   - *Women, Minorities and Persons with Disabilities in Science and Engineering,* National Science Foundation, 1999 (NS 1.49).
   - *Women and Science Celebrating Achievements Charting Challenges* (National Science Foundation, 1997)
2. Web-based Resources:
   - AMS Math Moments – http://www.ams.org/mathmoments/
   - Association for Women in Mathematics – http://www.awm-math.org
   - Geogebra – http://www.geogebra.org
   - Maple Center – http://www.maplesoft.com/students/index.aspx
   - Math Forum – http://nctm.org/mathforum
   - MathWorld – http://mathworld.wolfram.com
   - Multicultural Pavilion – http://www.edchange.org/multicultural
   - Project Interactivate – www.shodor.org/interactivate
   - PurpleMath – http://purplemath.com
   - SOS Mathematics – http://www.sosmath.com/
   - Wolfram Alpha Knowledge Engine – http://www.wolframalpha.com/

Final Grades: The final grade will be created by the sum of the following elements:

- Homework assignments where the average is worth 26%.
- 7 quizzes where the average of the six highest scores is worth 15%.
- Participation in each of the discussion forums for each phase which is worth 7%.
- The Midterm Exam worth 20%.
- The Final Exam with 32%.

The final grade will be translated into a letter grade as follows:

- A: 90.0 and above
- B: 80.0 to 89.9
- C: 70.0 to 79.9
- D: 60.0 to 69.9
- F: 59.9 or below

Limited Attempts Policy: Effective Fall 2017, UNG students in college-level courses are limited to three attempts at a course. An attempt is defined as any term where a student receives a grade, a W, or a WF for the test.

Supplemental Syllabus: Additional information is provided at http://ung.edu/academic-affairs/policies-and-guidelines/supplemental-syllabus.php covering the following topics: Academic Success Plan Program, Students with Disabilities, Academic Integrity Policy, Disruptive Behavior Policy, Class Evaluations, Academic Exchange, Inclement Weather, & Course Grades and Withdrawal Process

SPECIFIC DETAILS OF THIS SYLLABUS MAY BE SUBJECT TO CHANGE