UNG UNIVERSITY of NORTH GEORGIA™
COLLEGE OF SCIENCE & MATHEMATICS
Department of Mathematics

BASIC COURSE INFORMATION

Semester/Academic Year:	Spring 2026	
Course:	Brief Calculus – MATH 2040	In-Person Format
Instructor:	Thomas Hartfield	
Office / Web:	Watkins Academic Building - 120	http://faculty.ung.edu/thartfield/
Phone / Email:	678.717.3858	thomas.hartfield@ung.edu
In Person Office Hours for Student Assistance:	Monday | Wednesday afternoons Tuesday| Thursday mornings	1:30pm – 3:15pm 9:00am – 11:00am

First Day for Withdrawal (W): Saturday, 17 January 2026 at 12:00midnight
After this date and time, exiting the course will require either a withdrawal (W or WF) or a letter grade (A/B/C/D/F).

Last Day for Withdrawal (W): Friday, 20 March 2026 before 11:59pm
After this date and time, it is no longer possible to withdraw with a W. A student withdrawing after this point will receive a WF.

Final Day of Class: Friday, 1 May 2026

Projected Test Dates:
Unit 1: Wednesday, 4 February 2026
Unit 2: Wednesday, 18 February 2026
Unit 3: Friday, 6 March 2026
Unit 4: Monday, 30 March 2026
Unit 5: Monday, 13 April 2026
Unit 6: Wednesday, 29 April 2026

Final Exam:
MWF 9am class (sect. G04, CRN 1620): Wednesday, 6 May 2026 at 8:00 am in Watkins 134
MWF 11am class (sect. G02, CRN 1625): Wednesday, 6 May 2026 at 10:20 am in Watkins 134

Instructional Materials:
1. Guided Notes and Instructional Videos in eLearning@UNG [D2L]
2. Online Assignments: MyLab for *Calculus with Applications* embedded in Course Materials (within eLearning@UNG [D2L])
3. Textbook: *Calculus with Applications (Brief Version)*, 12th ed. by Lial, Greenwell, & Ritchey, Pearson Education 2022, embedded in Course Materials (within eLearning@UNG [D2L])

Technology Requirements:
1. A graphing calculator will be required in class and on assignments. The class standard is a TI-84 series calculator (without CAS abilities). Students wishing to use a different calculator should request review from the instructor to ensure that calculator is acceptable for testing.
2. A personal computer with internet access to use the MyLab program through D2L.

Course Description: This course is intended for non-science majors, with particular emphasis on applications of calculus to business. It will develop familiarity with such concepts as limits, the derivative, the definite integral, the indefinite integral and their applications. **Credit:** 3 hours. **Prerequisite**: Grade of C or above in MATH 1111.

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CURRICULAR INFORMATION

Core Curriculum:

This course is a Core IMPACTS course that is part of the STEM 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 ask scientific questions or use data, mathematics, or technology to understand the universe?

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

- Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems, and explain natural phenomena.

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

- Inquiry and Analysis
- Problem-Solving
- Teamwork

Course Objectives:

After completion of the course the student will be:

- Use numerical, graphical, and analytical techniques to investigate the behavior of a function using the concept of a limit.
- Evaluate limits using analytical methods.
- Describe the behavior of a function by finding infinite limits and limits at infinity.
- State the definition of the derivative.
- Interpret the value of a derivative as a rate of change.
- Find the derivative of algebraic, exponential, and logarithmic functions.
- Analyze the behavior of a function by using derivatives.
- Solve application problems using differentiation.
- Find local maxima and minima of a function.
- Solve application problems involving optimization.
- Find antiderivatives of algebraic, exponential, and logarithmic functions.
- Evaluate definite integrals by using the Fundamental Theorem of Calculus
- Calculate and interpret a definite integral as an area or a net change.
- Solve application problems using indefinite and definite integrals.

Course Content:

Unit	Themes	Anticipated Dates
0	Functions Used in Business Math	Discussion: 14 Jan – 16 Jan
1	Limits, Rates of Change, Intro to Derivatives, Continuity	Instruction: 21 Jan – 2 Feb Test: Wednesday, 4 February
2	Techniques for Finding Derivatives (part 1), Applications of Derivatives	Instruction: 6 Feb – 16 Feb Test: Wednesday, 18 February
3	Techniques for Finding Derivatives (part 2), Higher Order Derivatives, Partial Derivatives	Instruction: 20 Feb – 4 Mar Test: Friday, 6 March
4	Absolute Extrema, Increasing/Decreasing Behavior, Relative Extrema, Optimization	Instruction: 16 Mar – 27 March Test: Monday, 30 March
5	Concavity, Inflection Points, Economic Concepts, Indefinite Integration	Instruction: 1 Apr – 10 Apr Test: Monday, 13 April
6	Integration by Substitution, Definite Integration, Applications of Integration	Instruction: 15 Apr – 27 Apr Test: Wednesday, 29 April

CLASS POLICIES, PART 1

Attendance Policy:

Students are expected to attend class unless they feel it is unsafe to do so for themselves or for the sake of others.

Attendance will be checked for whatever format the class is meeting within. Absences from in-person instruction (when the campus is open) or from online instruction (when the campus is closed) will only be excused when notification is provided from the Office of the Dean of Students is received.

Students with more than four unexcused absences, or nine or more total absences, can be withdrawn from the course by the instructor. Students withdrawn from the course by the instructor can appeal and be reinstated to their class with instructor and registrar approval.

Students repeatedly arriving late or leaving early may be assessed a cumulative absence if the aggregate time missed is equal to a full class period.

Students are encouraged to bring technology to class to work on assignments when activities associated with the flipped format do not require their attention. However, students may be asked to leave the classroom if their use of technology is disruptive to other students.

Any student who fails the course will have his/her date of last attendance or assignment completed noted for federal financial aid regulations.

Methods of Instruction:

Primary direct instruction will be in a modified "flipped" format, delivered by lecture videos provided through eLearning. Support for this direct instruction will be done using live practice and feedback; when the campus is open and the instructor is permitted in the classroom with students, live instruction will be done face to face in the classroom. (In the event that the campus is closed, live instruction will be achieved through online synchronous video meetings facilitated through eLearning.)

Secondary instruction and feedback will be driven by computer-based assessments which supplement direct instruction. Students should assess and monitor their own problem-solving process to determine when an error has been made, or a new strategy should be used.

Evaluation Methods:

Formative assessment will be in the form of six written in-class tests covering each unit 1-6. Summative assessment will be in the form of a final examination covering units 1-6. Homework will be used to supplement the formative assessment.

MyLab Assignments:

All homework assignments will be completed through the MyLab platform which will be accessed via D2L through the First Day Access program.

Homework for units 0 through 6 will comprise the homework grade category in the D2L gradebook. Assignments from units 1 through 6 will be due at 11:59 pm the night before the unit test (as listed in the Course Content section of the syllabus). Unit 0 homework will be due concurrently with the unit 1 homework.

Algebra Review homework is provided to review the fundamentals needed for this course. This homework will count exclusively as extra credit in the homework category and must be completed by 11:59pm on Sunday, 1 February 2026. No extensions or late work will be accepted.

All homework assignments from units 0 through 6 will remain open until 12:00noon on Tuesday, 5 May 2026, with a 20% penalty applied to any exercise answered late. Assignments not attempted will receive a 0.

CLASS POLICIES, PART 2

Testing Policy:

Unit tests and the final exam will be given in a face-to-face format on paper; students will need to bring a pencil and their calculator (and only these items) for these tests. Work, as well as final answers, will be assessed, with partial credit being awarded as appropriate; credit can be withheld for a lack of written appropriate work.

Students are expected to take tests and the final exam in the classroom unless the campus is closed. Tests in the classroom must be started before any student in the room completes the test. Students with appropriate accommodations are exempt from these requirements but are expected to put forth a good faith effort to schedule tests and the exam with the Office Students Accessibility Services at a time similar to in-class tests.

Students may request to take a test earlier than it is given in the classroom. No make-up tests will be offered, except in extremely exceptional circumstances (such as hospitalization, legal or military obligations, or university activities approved by a dean or higher-level academic official).

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.

Artificial intelligence cannot be used to complete any graded work.

During a test or exam, students are prohibited from:

- taking, giving, or receiving aid of any type with another student,
- using a mobile phone or smart watch for any purpose,
- intentionally using an unapproved calculator.

A student who acts in an academically dishonest manner will receive a zero for the test or 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.

Final Grades:

The semester grade will be calculated by the following weighted sum, except as noted below:

Each of the five best test grades will count 10%, the homework average will count 25%, and the final exam will count 25%

Exception 1: Any student assigned a 0 due to academic dishonesty will have the fifth best test score replaced by the 0.

Exception 2: If a student has fewer than five test grades, the grade on the final exam will be applied as a test score to ensure five tests are used in the calculation.

The homework average will be calculated in D2L based on a weighted average of all homework assignments scheduled in MyLab from units 0 through 6. Homework from the Algebra Review will be treated as extra credit; however, the homework average will be capped at 100%. The final homework average will be determined on Tuesday, 5 May 2026.

100%	90%	80%	70%	60%	0%
A	B	C	D	F	

ADDITIONAL INFORMATION

Classroom Recording: Class sessions in Watkins 134 will be recorded through screen capture and room audio. These recordings will only be available to members of the classroom community and will be posted within eLearning within one week (preferably 24 hours). Recordings are auto-captioned by computer. Viewing a classroom recording in lieu of being physically present in class will be considered an unexcused absence for attendance policy purposes (unless previously cleared by the instructor or excused by the Office of the Dean of Students).

Tutoring Resources: Free tutorial assistance is available in the MathLab, located off the ACTT Center, in the Watkins Building of the Gainesville campus. Tutors in the MathLab are not intended to replace classroom instruction; the primary responsibility of tutors is to clarify possible misunderstandings and assist in understanding processes and purposes of assignments and assessments.

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/

Schedule Changes: The instructor reserves the right to reschedule assignments by up to two class meetings due to unexpected events or adjustments in class pacing. Test postponements may be announced up through the class meeting preceding the scheduled date of test.

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

Student Code of Conduct: Students at UNG are bound by the Student Code of Conduct Policy. Incorporated in this policy is the UNG Honor Code: A student will not lie, cheat, steal, plagiarize, evade the truth, conspire to deceive, or tolerate those who do.

Supplemental Syllabus: Additional information is provided at http://ung.edu/academic-affairs/policies-and-guidelines/supplemental-syllabus.php.

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PLANNED SCHEDULE FOR SPRING 2026

(subject to change or adjustment)

- Week 1
  - Monday, 12 Jan – Read Syllabus Before Class
  -
  - Wednesday, 14 Jan – Watch Unit 0 Videos
  -
  - Friday, 16 Jan – Continue Existing Material
    WITHDRAWAL WITH W BEGINS SATURDAY, 17 JAN

- Week 2
  - NO CLASS MONDAY, 19 JAN
  -
  - Wednesday, 21 Jan – Watch Videos 1.1, 1.2 Before Class
  -
  - Friday, 23 Jan – Watch Video 1.3 Before Class

- Week 3
  - Monday, 26 Jan – Watch Video 1.4 Before Class
  -
  - Wednesday, 28 Jan – Watch Video 1.5 Before Class
  -
  - Friday, 30 Jan – Watch Video 1.6 Before Class
    ALGEBRA REVIEW EXTRA CREDIT DEADLINE, SUNDAY, 1 FEB

- Week 4
  - *Monday, 2 Feb – Review Day in Class*
  - **UNITS 0 AND 1 HOMEWORK DUE, TUESDAY, 3 FEB**
  - ***Wednesday, 4 Feb – Unit 1 Test in Class***
  -
  - Friday, 6 Feb – Watch Videos 2.1, 2.2 Before Class

- Week 5
  - Monday, 9 Feb – Watch Video 2.3 Before Class
  -
  - Wednesday, 11 Feb – Watch Video 2.4 Before Class
  -
  - Friday, 13 Feb - Watch Video 2.5 Before Class

- Week 6
  - *Monday, 16 Feb – Review Day in class*
  - **UNIT 2 HOMEWORK DUE, TUESDAY, 17 FEB**
  - ***Wednesday, 18 Feb – Unit 2 Test in class***
  -
  - Friday, 20 Feb – Watch Videos 3.1, 3.2 Before Class

- Week 7
  - Monday, 23 Feb - Watch Video 3.3 Before Class
  -
  - Wednesday, 25Feb – Watch Videos 3.4, 3.5 Before Class
  -
  - Friday, 27 Feb – Watch Videos 3.6, 3.7 Before Class

- Week 8
  - Monday, 2 Mar – Watch Video 3.8 Before Class
  -
  - *Wednesday, 4 Mar – Review Day in Class*
  - **UNIT 3 HOMEWORK DUE, THURSDAY, 5 MAR**
  - ***Friday, 6 Mar – Unit 3 Test in class***

- Spring Break (9-13 Mar)

- Week 9
  - Monday, 16 Mar – Watch Video 4.1 Before Class
  -
  - Wednesday, 18 Mar - Watch Videos 4.2, 4.3 Before Class
  -
  - Friday, 20 Mar – Watch Video 4.4 Before Class
    WITHDRAWAL WITH W ENDS FRIDAY, 20 MAR

- Week 10
  - Monday, 23 Mar - Watch Videos 4.5, 4.6 Before Class
  -
  - Wednesday, 25 Mar - Watch Video 4.7 Before Class
  -
  - *Friday, 27 Mar – Review Day in Class*
    UNIT 4 HOMEWORK DUE, SUNDAY, 29 MAR

- Week 11
  - ***Monday, 30 Mar – Unit 4 Test in class***
  -
  - Wednesday, 1 Apr – Watch Videos 5.1, 5.2 Before Class
  -
  - Friday, 3 Apr - Watch Videos 5.3, 5.4 Before Class

- Week 12
  - Monday, 6 Apr – Watch Video 5.5 Before Class
  -
  - Wednesday, 8 Apr - Watch Videos 5.6, 5.7 Before Class
  -
  - *Friday, 10 Apr – Review Day in Class*
    UNIT 5 HOMEWORK DUE, SUNDAY, 12 APR

- Week 13
  - ***Monday, 13 Apr – Unit 5 Test in class***
  -
  - Wednesday, 15 Apr – Watch Video 6.1 Before Class
  -
  - Friday, 17 Apr – Watch Video 6.2 Before Class

- Week 14
  - Monday, 20 Apr – Watch Videos 6.3a, 6.3b Before Class
  -
  - Wednesday, 22 Apr - Watch Video 6.4 Before Class
  -
  - Friday, 24 Apr - Watch Video 6.5 Before Class

- Week 15
  - *Monday, 27 Apr – Review Day in Class*
  - **UNIT 6 HOMEWORK DUE, TUESDAY, 28 APR**
  - ***Wednesday, 29 Apr – Unit 6 Test in class***
  -
  - FRIDAY, 1 MAY – SUMMARY DAY FOR SEMESTER

- Exam Week
  - *Monday, 4 May – Optional Exam Review Day*
  - **FINAL DEADLINE FOR HOMEWORK AT NOON, TUESDAY, 5 MAY**
  - ***WEDNESDAY, 6 MAY – FINAL EXAM IN CLASS***

Planned Schedule for Spring 2026

(subject to change or adjustment)

	Monday		Tuesday		Wednesday		Thursday		Friday		
1	12 Jan	Read Syllabus	13 Jan		14 Jan	Watch Unit 0 Video	15 Jan		16 Jan	Continue Unit 0	Sat, 17 Jan - W Withdrawal begins
2	19 Jan	HOLIDAY	20 Jan		21 Jan	Watch Videos 1.1 and 1.2	22 Jan		23 Jan	Watch Video 1.3	
3	26 Jan	Watch Video 1.4	27 Jan		28 Jan	Watch Video 1.5	29 Jan		30 Jan	Watch Video 1.6	Sun, 1 Feb - due date Algebra Review HW
4	2 Feb	*In Class Review*	3 Feb	Tue, 3 Feb - due date Unit 1 HW (+ Unit 0)	4 Feb	UNIT 1 TEST	5 Feb		6 Feb	Watch Videos 2.1 and 2.2	
5	9 Feb	Watch Videos 2.3	10 Feb		11 Feb	Watch Videos 2.4	12 Feb		13 Feb	Watch Videos 2.5	
6	16 Feb	*In-Class Review*	17 Feb	Tue, 17 Feb - due date Unit 2 HW	18 Feb	UNIT 2 TEST	19 Feb		20 Feb	Watch Videos 3.1 and 3.2	
7	23 Feb	Watch Video 3.3	24 Feb		25 Feb	Watch Videos 3.4 and 3.5	26 Feb		27 Feb	Watch Videos 3.6a and 3.6b	
8	2 Mar	Watch Video 3.7	3 Mar		4 Mar	*In-Class Review*	5 Mar	Thu, 5 Mar - due date Unit 3 HW	6 Mar	UNIT 3 TEST	
	9 Mar	Spring Break	10 Mar	Spring Break	11 Mar	Spring Break	30 Apr	Spring Break	13 Mar	Spring Break	
9	16 Mar	Watch Video 4.1	17 Mar		18 Mar	Watch Videos 4.2 and 4.3	12 Mar		20 Mar	Watch Video 4.4	Fri, 20 Mar - W Withdrawal ends
10	23 Mar	Watch Videos 4.5 and 4.6	24 Mar		25 Mar	Watch Video 4.7	19 Mar		27 Mar	*In-Class Review*	Sun, 29 Mar due date Unit 4 HW
11	30 Mar	UNIT 4 TEST	31 Mar		1 Apr	Watch Videos 5.1 and 5.2	26 Mar		3 Apr	Watch Videos 5.3 and 5.4	
12	6 Apr	Watch Video 5.5	7 Apr		8 Apr	Watch Videos 5.6 and 5.7	2 Apr		10 Apr	*In-Class Review*	Sun, 12 Apr due date Unit 5 HW
13	13 Apr	UNIT 5 TEST	14 Apr		15 Apr	Watch Video 6.1	9 Apr		17 Apr	Watch Video 6.2	
14	20 Apr	Watch Videos 6.3a and 6.3b	21 Apr		22 Apr	Watch Video 6.4	16 Apr		24 Apr	Watch Video 6.5	
15	27 Apr	*In-Class Review*	28 Apr	Tue, 28 Apr - due date Unit 6 HW	29 Apr	UNIT 6 TEST	23 Apr		1 May	Review for Exam	
	4 May	Review Day - Optional Class Day	5 May	Tue, 5 May - final HW deadline at 12noon	6 May	FINAL EXAM	7 May		8 May		