

UNIVERSITY OF NORTH GEORGIA
COLLEGE OF SCIENCE AND MATHEMATICS
MATHEMATICS DEPARTMENT

- Semester / Course: Fall 2016 MATH 1111 – College Algebra
- Instructor: Thomas Hartfield
- Office / Web: Watkins Academic Building - 120 <http://faculty.ung.edu/thartfield/>
- Phone / Email: 678.717.3858 thomas.hartfield@ung.edu
- Office Hours: Mondays/Wednesdays 11:00 am – 12:00 pm, 3:00 pm – 4:00 pm
Tuesdays/Thursdays 11:00 am – 12:00 pm, 1:00 pm – 2:00 pm
other times may be possible by request, contact professor
- Withdrawal Deadline: Friday, October 14, 2016
- Final Exam: MW 1:15 pm class (G19): Friday, December 16, 2016 at 12:40 pm
TR 2:00 pm class (G20): Thursday, December 15, 2016 at 3:00 pm
MW 4:05 pm class (G21): Friday, December 15, 2016 at 3:00 pm
- Knowledge Base:
1. Required Text: Guided Notes at Instructor's Web Page
 2. Supplemental Text: *College Algebra, 3rd Ed.* by Carl Stitz and Jeff Zeager, available at Instructor's Webpage
 3. Required Online Access: WebAssign
 4. Library Resources:
 - Mathematics Teacher, NCTM, Reston, VA.
 - Schaum's easy outlines. **College algebra** : based on Schaum's Outline of **college algebra** by Murray R. Spiegel and Robert E. Moyer [computer file] / abridgement editor, George J. Hademenos
 - Bell, E. T. Men of Mathematics. New York: Simon & Schuster, 1937.
 - Osen, Lynn. Women in Mathematics. Cambridge MA, MIT Press, 1974.
 - *Women and Science Celebrating Achievements Charting Challenges* (NSF, 1997)
 - *Multicultural and Gender Equity in the Mathematics Classroom: The Gift of Diversity* (Janet Trentacosta & J. Kenney, Eds., NCTM, 1997)
 5. Web-based Resources:
 - Project Interactivate - <http://www.shodor.org/interactivate>
 - Association for Women in Mathematics – <http://www.awm-math.org>
 - The Math Forum - <http://mathforum.org/>
 - Texas Instruments - <http://education.ti.com/educationportal>
 - Key Curriculum Press – <http://www.keypress.com>
 - Eric Weisstein's World of Mathematics (Encyclopedia of Mathematics) - <http://mathworld.wolfram.com>
 - Math Nerds – <http://www.mathnerds.com/mathnerds>
 - SOS Mathematics – <http://www.sosmath.com>
 - Multicultural Pavilion - <http://www.edchange.org/multicultural>
 - Women in Mathematics - <http://www.aqnesscott.edu/lriddle/women/women.htm>
 - Careers in Mathematics - <http://www.ams.org/early-careers/>
 6. Technology Resources:
 - Required graphing calculator access – TI-83 or TI-84 strongly preferred – cannot do symbolic algebra manipulation
 - Recommended download of Geogebra, available free online
 - Use of a computer and the ability to get online is required.

Catalog Description: Topics include algebraic and absolute value equations and inequalities; piece-wise 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 or MATH 2040. Students in majors that do **not** require these courses are encouraged to take MATH 1001 or MATH 1101. **Credit:** 3 hours.
Prerequisite: Regular placement or successful completion of MATH 0099 or MATH 0989. **Co-requisite:** MATH 0999 is required if Math 0989 is successfully completed; otherwise, the Math Placement Index is used to determine if MATH 0999 is required.

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

- Prepared for further work in mathematics.
- Able to represent and solve real-world problems and applications of mathematics.
- Exposed to technology that enhances understanding of mathematics.
- Able to apply the distance and midpoint formulas.
- Able to graph and find the equation of a circle in standard form.
- Able to apply a variety of problem solving strategies including algebraic, numerical, and graphical techniques to analyze and/or solve piecewise-defined, polynomial, rational, and absolute value equations and inequalities.
- Able to apply function concepts and notation including function composition and inverse function.
- Able to set up and solve variation problems.
- Able to perform sums, products, and quotients of polynomials (including the Remainder and Factor Theorems.)
- Able to apply a variety of problem solving strategies including algebraic, numerical, and graphical techniques to solve exponential and logarithmic functions.
- Able to solve and classify systems of linear equations.

Methods of Instruction: Will include, but are not limited to: lecture, question-and-answer sessions, feedback from formative assessments, and computer and/or calculator based explorations. Students are encouraged to assess and monitor their own problem-solving process to determine when an error has been made or a new strategy should be used.

Attendance Policy: Students with four or more absences *may* be withdrawn from the class in accordance with the UNG policy on excessive absences. Students withdrawn prior to the midpoint may receive either a W or a WF. Students withdrawn from the class after the midpoint will receive a WF. A student who fails the course will have his/her date of last attendance or assignment completed noted for federal financial aid regulations.

Evaluation Methods: Formative assessment will be in the form of four written tests, supplemented by online homework assignments, and summative assessment will be in the form of a final examination.

Tentative Test Dates are:

Test 1 on Wednesday, September 14 *or* Thursday, September 15

Test 2 on Monday, October 10 *or* Tuesday, October 11

Test 3 on Wednesday, November 2 *or* Thursday, November 3

Test 4 on Monday, December 5 *or* Tuesday, December 6

Testing Policy: In class tests must be started before any student in the classroom completes his/her test.

No make-up tests will be offered. The final exam grade will be applied in the place of any missed test.

Homework Policy: A collection of assignments covering the topics of each unit will be available on WebAssign at the beginning of each unit. The homework for each unit will be due at the beginning of the class period on the day of the unit test. Students are *strongly* encouraged not to get behind on the homework assignments. No alternative homework assignments will be offered.

Final Grades: The semester grade will be determined by multiplying the four test grades and the homework grade each by 15% and adding these scores to 25% of the Final Exam grade.

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

ALG Grant Disclosure: This class is part of a UNG project participating in the Affordable Learning Georgia initiative by the USG Board of Regents. The textbook for this course is open source and is free for students to use. Online homework access for one semester through WebAssign will cost \$27.95 and must be paid for through the WebAssign web site. Students will be expected to complete surveys about the course, with a particular emphasis on technology competency, as a part of this initiative. For more questions, please contact the instructor.