Semester / Course: Fall 2017 MATH 1111 – College Algebra
Instructor: Thomas Hartfield
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Phone / Email: 678.717.3858 thomas.hartfield@ung.edu
Office Hours: Monday / Wednesday / Friday 9:30 – 10:00 am, 11:00 – 12 noon
Tuesday / Thursday 1:00– 2:00 pm, 5:00 – 5:30 pm

First Day for Withdrawal (W): Saturday, August 26, 2017
Last Day for Withdrawal (W): Friday, October 13, 2017

Final Exam: 1:00 pm class: at 12:40pm on Monday, December 11, 2017
2:00 pm class: at 12:40pm on Wednesday, December 13, 2017

Knowledge Base:
1. Required Materials: Guided Notes in eLearning@UNG
2. Supplemental Text: Algebra and Trigonometry, 4/e by Stewart, Redlin, and Watson
3. Required Online Access: WebAssign

Library Resources:
- Mathematics Teacher, NCTM, Reston, VA.
- Women and Science Celebrating Achievements Charting Challenges (NSF, 1997)

Web-based Resources:
- Project Interactivate - http://www.shodor.org/interactivate
- Association for Women in Mathematics – http://www.awm-math.org
- Texas Instruments - http://education.ti.com/educationportal
- Eric Weisstein’s World of Mathematics (Encyclopedia of Mathematics) - http://mathworld.wolfram.com
- SOS Mathematics – http://www.sosmath.com
- Multicultural Pavilion - http://www.edchange.org/multicultural
- Women in Mathematics - http://www.agnesscott.edu/friddle/women/women.htm
- Careers in Mathematics - http://www.ams.org/early-careers/

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.

Preliminary Schedule:

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<tr>
<th>Unit</th>
<th>Topics</th>
<th>Themes</th>
<th>Expected Dates</th>
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<tbody>
<tr>
<td>1</td>
<td>0-12</td>
<td>Coordinate Planes and Graphing; Linear Equations &amp; Systems; Introduction to Function; Piecewise-Defined Functions</td>
<td>Aug 21 – Sep 11</td>
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<td><strong>Test 1: Wed. September 13</strong></td>
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<td>2</td>
<td>13-22</td>
<td>Basic Functions &amp; Transformations; Absolute Value Inequalities; Combining Functions; Inverse Functions</td>
<td>Sep 15 – Oct 2</td>
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<td><strong>Test 2: Wed. October 4</strong></td>
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<td>3</td>
<td>23-31</td>
<td>Average Rate of Change; Quadratic Equations, Inequalities, &amp; Functions; Circles; Polynomial Equations &amp; Inequalities</td>
<td>Oct 2 – Oct 18</td>
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<td><strong>Test 3: Fri. October 20</strong></td>
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<td>4</td>
<td>32-39</td>
<td>Polynomial Functions; Dividing Polynomials; Rational Equations, Inequalities, &amp; Functions; Variation</td>
<td>Oct 23 – Nov 6</td>
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<td><strong>Test 4: Wed. November 8</strong></td>
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<td>5</td>
<td>40-47</td>
<td>Exponential Expressions, Equations &amp; Functions; Logarithmic Expressions, Equations &amp; Functions</td>
<td>Nov 6 – Dec 4</td>
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<td><strong>Test 5: Wed. December 6</strong></td>
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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 six 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 five written tests and summative assessment will be in the form of a final examination. Homework grades will be used to supplement the formative assessment. WebAssign homework assignments are due at 11:59 pm on the day of the test.

Testing Policy: Tests may only be taken if started prior to any student completing the test in the classroom. No make-up tests will be permitted. Students who miss more that one test will have their final exam grade applied to replace zeroes.

Academic Honesty: Academic honesty is highly valued at UNG. Any student caught cheating or using inappropriate materials during a test will receive a 0 grade for the test and will be referred to the Office of the Dean of Students.

Final Grades: The semester grade will be determined as follows: four highest test grades each counting 15%, average of all WebAssign homework assignments counting 15%, and final exam score counting 25%

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<th>70%</th>
<th>60%</th>
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<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
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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: 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.