## UNIVERSITY OF NORTH GEORGIA COLLEGE OF SCIENCE AND MATHEMATICS MATHEMATICS DEPARTMENT

Course: MATH 1111 – College Algebra

Semester: Fall 2015

Instructor: Thomas Hartfield

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Office Hours: Monday & Wednesday 8:15 – 8:45 am, 2:15 – 3:00 pm

Tuesday & Thursday 8:15 – 9:15 am, 1:15 – 3:00 pm

Withdrawal Deadline: Monday, October 12, 2015

Final Exam: Monday, December 7, 2015 G14 9:00 at 8:00am / G15 1:15 at 12:40pm

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.

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

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 piece- wise 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.

Knowledge Base:

- 1. Textbook: College Algebra, Julie Miller, 2014; ISBN: 978-007-803563-0
- 2. Required Online Access: ConnectMath for College Algebra Fall 2015 ConnectMath Course Code: GPPYD-QVD3Y
- 3. Required Notes: Instructor Guided Notes at Instructor Web Page
- 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)

## 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 <a href="http://www.keypress.com">http://www.keypress.com</a>
- Eric Weisstein's World of Mathematics (Encyclopedia of Mathematics) http://mathworld.wolfram.com
- Math Nerds http://www.mathnerds.com/mathnerds
- SOS Mathematics <a href="http://www.sosmath.com">http://www.sosmath.com</a>
- Multicultural Pavilion http://www.edchange.org/multicultural
- Women in Mathematics http://www.agnesscott.edu/lriddle/women/women.htm
- Careers in Mathematics <a href="http://www.ams.org/early-careers/">http://www.ams.org/early-careers/</a>

## 6. Technology Resources:

Graphing calculator – TI-83 or TI-84 strongly preferred – cannot do symbolic algebra manipulation

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.

Evaluation Methods: Formative assessment will be in the form of six written tests and summative assessment will be in the form of a final examination. Homework grades will be used to supplement the formative assessment.

Tentative Test Dates for Fall 2015 are:

Test 1 on Wednesday, September 2 Test 4 on Friday, October 23 Test 2 on Monday, September 21 Test 5 on Friday, November 6 Test 3 on Wednesday, October 7 Test 6 on Friday, November 20

**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.

Final Grades:

The semester average will be determined by the average of eight scores comprised as follows: the five best test grades, the higher grade of the homework and quiz averages, and the final exam counting twice.

100%	90	)%	809	%	70%	60	0%	0%
<i>A</i>	4	В		С		D	F	

Attendance Policy:

Students with greater than six absences during the term, including more than three consecutive unexcused absences at any time, may be withdrawn from the class by the instructor in accordance with the UNG policy on excessive absences. Students withdrawn from the class 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.

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.

Supplemental Syllabus: Additional information is provided at <a href="http://ung.edu/academic-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.