

# Math 4043 - Number Theory Fall 2016

**Instructor:** Dr. David Leach  
**Location:** 304 Boyd  
**Time:** MWF 11:15 am - 12:05 pm  
**Office:** 317 Boyd  
**Phone:** (678)-839-4127  
**Email:** cleach@westga.edu  
**Textbook:** *Elementary Number Theory*, 7<sup>th</sup> Edition, David M. Burton

## Topics & Sections:

1. Divisibility 2.2-2.5
2. Primes and their Distribution 3.1-3.2
3. Congruences 4.2-4.4
4. Fermat's and Wilson's Theorems 5.2-5.3
5. Special Number Theoretic Functions 6.1
6. The Euler phi-function 7.2-7.3
7. The Quadratic Reciprocity Law 9.1-9.3
8. Perfect Numbers 11.2
9. Pythagorean Triples 12.1-12.2
10. Fibonacci Numbers 14.2-14.3

**Grading and Evaluation:** We will have three tests, around ten in-class quizzes, several take-home quizzes, and a final exam. Tentative test dates are given below. In-class quizzes will be given on Mondays of most weeks, unless there is a test scheduled for that day. If I decide to move tests or quizzes, I will let you know at least two class days in advance. Your lowest quiz score will be dropped. The remaining quizzes will be averaged together into a grade out of 150 points. There will be a total of 600 points available, as shown below.

Test 1 (Sep 12):	100 points
Test 2 (Oct 10):	100 points
Test 3 (Nov 07):	100 points
Quiz Average:	150 points
Final Exam :	150 points
Total:	600 points

Your points earned will be divided by 6 and rounded to the nearest whole number. A grade will be assigned according to the standard scale (90-100: A, 80-89: B, 70-79: C, 60-69: D, 0-59: F). Homework will be assigned daily. It will not be graded, but it is vital that you complete the homework.

**Make-ups:** In order to take a make-up test or quiz, you must have a valid, documented reason for missing it, and take the make-up within two weekdays of returning to class.

**Homework:** Homework problems will be assigned from each section. It will not be graded, but it is important that you complete it. It is also important that you read the textbook. You should expect to spend at least six hours outside of class each week working on material for this class.

**Late Take-Home Quizzes:** Due to abuses in the past, I will only accept one unexcused late take-home quiz from each student throughout the semester. They will be penalized 20% per class day, and assignment will be accepted more than two class days after the due date.

**Other Course Policies:** Other course policies, including information regarding students with disabilities and the UWG Honor Code can be found at the URL below. You should read this at the beginning of each semester.  
<http://www.westga.edu/UWGSyllabusPolicies/>

## Important Dates:

<b>Labor Day:</b>	Sep 5
<b>Last Day to Withdraw:</b>	Sep 30
<b>Fall Break:</b>	Oct 6-7
<b>Thanksgiving:</b>	Nov 21-25
<b>Last Day:</b>	Dec 2
<b>Final Exam:</b>	Friday Dec 9 11:00-1:00