Math 1001 – Quantitative Skills & Reasoning – 3 Credit Hrs
Sections L2R, LXR, Spring 2015
TTh 3:30-4:50 pm; Pafford Bldg rm. 110

Instructor: Mr. Ricky Johnson
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Phone: (678) 839-4129
E-mail: rjohnson@westga.edu
Office Hours: MF 10:00-12:00; M 2:00-4:00; Tue 1:00-3:00; or by appointment

Prerequisites: None.

Course Description: This course is an alternate in Area A of the Core Curriculum and is not intended to supply sufficient algebraic background for students who intend to take Precalculus or the Calculus sequence for science majors. This course places quantitative skills and reasoning in the context of experiences that students will likely encounter. It emphasizes processing information in context from a variety of representations, understanding of both the information and the processing and understanding which conclusions can be reasonably determined.


Optional Resources: MyMathLab.com is a website which includes several useful resources that can help you with this course. To activate a subscription on MyMathLab.com, you will need to purchase an access code (either at the website or from the bookstore) and use courseID: johnson48745. The subscription lasts for one semester and grants you access to an online version of the textbook. Instructions on how to enroll in MyMathLab.com are on courseDen at https://westga.view.usg.edu

Calculator: You will need a calculator for this course; any type will do.

Learning Outcomes: Students will be able to demonstrate:
1. A stronger understanding of mathematical ideas
2. Appropriate usage of mathematical vocabulary, language, and notation
3. An understanding of how to use mathematical reasoning to analyze quantitative information and develop procedures for solving problems
4. An understanding of how to employ quantitative skills to critique mathematical arguments
5. An understanding of how to interpret and calculate financial information including interest and loans
6. An understanding of analyzing probability and statistical results in society
7. An understanding of the pervasiveness of mathematics in college, career, and life in general
**Attendance:** Attendance is mandatory and is important in order to do well in this course. Roll will be taken at every class. If you are late and miss the roll, you are absent. You will be allowed 3 unexcused absences. After the third, 1% will be deducted from your overall grade for each unexcused absence for up to a maximum of 5%. An unexcused absence is any absence other than one where you have documentation for an illness or a sponsored university event (e.g. athletes). If you miss a class you are still responsible for all material you may have missed including lecture notes, announcements, and assignments.

**Grading Policy:** Final grade will be based on the following scale:
(A=90-100%, B=80-<90%, C=70-<80%, D=60-<70%, F=<60).

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>4 Tests</td>
<td>35%</td>
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<tr>
<td>Test 1 Tuesday, January 27</td>
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<tr>
<td>Test 2 Thursday, February 26</td>
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<tr>
<td>Test 3 Thursday, March 26</td>
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<tr>
<td>Test 4 Tuesday, April 14</td>
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<tr>
<td>Class Participation (includes attendance)</td>
<td>5%</td>
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<tr>
<td>Quizzes</td>
<td>10%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Vocabulary Journal (4 installments)</td>
<td>10%</td>
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<tr>
<td>Final (Comprehensive) Thurs, April 23</td>
<td>20%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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**Test Policy:** The test dates are tentative and are subject to change. You will need a scantron form for each test and the final. Make-up tests will only be given for students with a documented excused absence. In that case, students should contact the instructor in advance, if possible, to reschedule the make-up test. Note, that make-up tests will usually be more difficult. There will be no make-up final exam.

**Quizzes:** There will be approximately 6-8 quizzes throughout the semester. Most of the quizzes will be announced before hand; however there may be an unannounced pop quiz. Some of the quizzes will be group quizzes (i.e. you may discuss your solutions with each other); while other quizzes will be individual. The lowest quiz score will be dropped. Consequently, there will be no make-up quizzes for ANY reason.

**Vocabulary Journal:** The journal will consist of a list of mathematical terms, their definitions, and an example demonstrating the term’s concept. Additional instructions will be provided on CourseDen. It will be due in 4 installments (each due at test dates).

**Homework Assignments:** There will be daily homework assignments due at the beginning of each lecture. Problems will be assigned for each section of the text that we cover. As a general rule, unless otherwise specified, the even-numbered problems will be required to be turned in; while the odd-numbered problems will be for practice only and will not need to be turned in. The 3 lowest homework assignment grades will be
dropped. Late assignments will not be accepted for ANY reason. If you anticipate missing a class to turn in an assignment, you may turn it in early. Homework will be graded for completeness mostly with only selected problems being graded for correctness including the following evaluation criteria.

**Evaluation Criteria:** Grades on all assessments will be based on the following criteria:
1. Accuracy of information (including calculations and use of terminology)
2. Logic and clarity of arguments.
3. Neat progression of steps.
4. Thoroughness of work.

**Other Course Policies:**
1. I use courseDen to record grades, announcements, homework problems.
2. Cell phones should be set to an inaudible setting or turned off.
3. All electronic correspondence between student and instructor should be by way of your UWG email account.
4. Arriving late and leaving early is discouraged as it is distracting and disrespectful.
5. You need to be prepared to study a minimum of 6-8 hours every week outside of class in order to do well in this course.

**Disabilities:** Students with documented disabilities (through West Georgia’s Disability Services) will be given all reasonable accommodations. Students must take the responsibility to make their disability known and request academic adjustments or auxiliary aids. Adjustments needed in relation to test-taking must be brought to the instructor's attention well in advance of the test (at least one week prior).

**Important Dates:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>January 5-January 11:</td>
<td>Drop/Add and late registration</td>
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<tr>
<td>January 19:</td>
<td>MLK Holiday (no classes, offices closed)</td>
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<tr>
<td>February 27:</td>
<td>Last day to withdraw with a grade of W</td>
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<td>March 16-20:</td>
<td>Spring Break (no classes)</td>
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<td>April 16:</td>
<td>Last Day of Class</td>
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<tr>
<td>April 23:</td>
<td>Final Exam Thursday 2:00 - 4:30 pm</td>
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The following sections of Blitzer’s book will be covered:

1.1 Inductive and Deductive Reasoning
1.2 Estimation, Graphs, and Mathematical Models
1.3 Problem Solving
2.1 Basic Set Concepts
2.2 Subsets
2.3 Venn Diagrams and Set Operations
2.4 Set Operations and Venn Diagrams with Three Sets
2.5 Survey Problems
3.1 Statements, Negations, and Quantified Statements

3.2 Compound Statements and Connectives
3.3 Truth Tables for Negation, Conjunction, and Disjunction
3.4 Truth Tables for the Conditional and Biconditional
3.5 Equivalent Statements and Variations of Conditional Statements

11.1 The Fundamental Counting Principle
11.2 Permutations
11.3 Combinations
11.4 Fundamentals of Probability
11.5 Probability with the Fundamental Counting Principle, Permutations, and Combinations

12.1 Sampling, Frequency Distributions, and Graphs
12.2 Measures of Central Tendency
12.3 Measures of Dispersion
12.4 The Normal Distribution
12.5 Problem Solving with the Normal Distribution
12.6 Scatter Plots, Correlation, and Regression Lines

8.1 Percent, Sales Tax, and Discounts
8.2 Income Tax
8.3 Simple Interest
8.4 Compound Interest
8.5 Annuities, Methods of Saving, and Investments
8.6 Cars
8.7 The Cost of Home Ownership