

## MATH 1001

### Quantitative Skills & Reasoning

---

**Instructor:** Kyunghee Moon, Ph. D.  
**Office:** Boyd Building, Room 216  
**Contacts:** Email: [kmoon@westga.edu](mailto:kmoon@westga.edu)  
Phone: 678-839-4151  
**Office hours:** 10:00-12:00 and 2:00-3:20 (T, Th)-Carrollton Campus  
11:30-1:00 (F)-Newnan Campus

**Textbook:**

Blitzer, R. (2015). *Thinking mathematically*, 6<sup>th</sup> Edition. Boston, MA: Pearson Education.

**Goals and Objectives of the Course** include, but not limited to,

1. Define inductive and deductive reasoning and be able to use inductive reasoning to find a pattern of a sequence and to predict the values in the sequence.
2. Be able to find the cardinality of a set and use the Venn Diagrams to represent sets and to do problem solving.
3. Describe the quantifiers in logical statements and be able to use the correct quantifiers in negating sentences.
4. Be able to find variations of conditional statements.
5. Know the difference between simple and compound interests and be able to use the information in computing interests and installments in many financial situations.
6. Explain how the results from simulations are related to theoretical probabilities
7. Compute and differentiate between permutations and combinations and use them in problem solving.

8. Find and differentiate among the central tendencies (mean, median, and mode) and variations (mean absolute deviation, variance, and standard deviation).
9. Define percentiles and quartiles and use them to draw normal curves and to interpret curves.

**Attendance and Classroom Rules:**

- Students must be **punctual** and **always** attend class. There could be unforeseen emergencies that do come up. However, anyone missing classes **FIVE times or more** during the semester **might not** receive a credit for the course. Medical excuses are only accepted when provided with documentation.
- Students cannot enter the classroom once the class starts and should wait **SILENTLY** outside of the classroom until the door is reopen. In such cases, students will be recorded as tardy. The first two tardiness combined will be considered as one absence. After two tardiness, each tardiness will be considered as an absence.
- Students who disrupt the class for any reason will be escorted to outside of the classroom, disallowed to return for the day, and marked absent.
- Students who have 0 or 1 absence (with **NO** exception for medical issues) OR who make a considerable contribution to the class discussions will be given an extra credit of 5 points toward the final grade.

**Use of Electronics:** Calculator is the only electronic device students can use in the classroom. **Calculator as a phone accessory is NOT allowed.** In fact, in no circumstance are students allowed to use any types of electronics other than calculators. Students who do not abide by this rule will be escorted to outside of the classroom, disallowed to return for the day, and marked absent.

**Grading:** Your final grade in the course will be based on your performance on quizzes, a mid-term exam, a final exam, and the extra credit of 5 points.

Quiz	30 pts
Midterm	30 pts
Final Exam	40 pts
(Extra Credit)	5 pts

---

105 pts

- A quiz will be given on Thursdays, in particular in the Weeks 2, 3, 4, 5, 6, 9, 10, 11, 12, and 13. Students will be allowed to drop one lowest score (**No makeup quiz in any case**).
- The midterm exam will be on Thursday of Week 7. The final exam will be on the final exam week. (Check the date and time on the UWG academic calendar.) No make-up exam is permitted except for medical emergencies that can be documented.
- Students are expected to do homework in a timely manner. However, homework will be neither collected nor graded.
- Final Course Grade:

A	90-105
B	80-89.99
C	70-79.99
D	60-69.99
F	Below 60

**Overall Philosophy:** You are required to provide detailed explanations of the mathematics on investigations, quizzes, and exams when requested. **It is possible to receive a poor score for a correct answer if you do not explain your ideas. On the other hand, a clear exposition with a minor computational error can receive a good score.**

What I expect from you as learners:

1. Attend every class. Since much of our class time will be spent to construct mathematical ideas through class work, it will be hard for you to catch up if you miss class.
2. Respect other students' ideas and be ready to justify your reasoning.
3. Keep up with homework. You will deepen your understanding of mathematical concepts by working on extra problems on your own. It will also provide a good opportunity to locate where your misunderstandings are.
4. Be an advocate of your own learning. Seek assistance for help. Come and see me during my office hours if you have any questions. You can also go to Mathlab for assistance.

**Common Language Link:** <http://tinyurl.com/UWGSyllabusPolicies>

### Tentative Schedule

Week	Topics	Materials
1 & 2	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• Inductive &amp; Deductive Reasoning</li> <li>• Interpreting Graphs</li> </ul>	Textbook-1.1 & 1.2
3, 4, & 5	<ul style="list-style-type: none"> <li>• Sets, Subsets, &amp; Cardinality</li> <li>• Set Operations with Venn Diagrams</li> <li>• Compound Statements &amp; Connectives</li> <li>• Conditional Statements &amp; Their Variations</li> </ul>	Textbook-2.1, 2.2, 2.3 & 2.4, 3.1, 3.2, 3.5, 3.6
6 & 7	<ul style="list-style-type: none"> <li>• Percents</li> <li>• Simple Interest</li> <li>• Midterm</li> </ul>	Textbook-8.1, 8.2, 8.3
8 & 9	<ul style="list-style-type: none"> <li>• Compound Interest and Its use-Retirement and Installment</li> </ul>	Textbook-8.4, 8.5, 8.6
10, 11, & 12	<ul style="list-style-type: none"> <li>• Counting</li> <li>• Permutation &amp; Combination</li> <li>• Theoretical &amp; Experimental Probability</li> <li>• Evens involving Not, And, &amp; Or</li> </ul>	Textbook-11.1, 11.2, 11.3, 11.4, 11.6, 11.7
12 & 13	<ul style="list-style-type: none"> <li>• Frequency and Graphs</li> <li>• Central Tendency &amp; Variation</li> <li>• Percentile, Quartile, and Normal Distribution</li> </ul>	Textbook-12.1, 12.2, 12.3, 12.4, 12.5
14	<ul style="list-style-type: none"> <li>• Review</li> </ul>	
15	<ul style="list-style-type: none"> <li>• Final Exam</li> </ul>	