MATH 1001: Quantitative Skills and Reasoning: Section 05
Spring 2015 Semester (Final Draft)

Instructor: Brian Brodsky  
Office: Boyd 106 C  
Phone Number: 678-839-5313  
Email: bbrodsky@westga.edu

Class Meetings: MWF: 9am – 9:52am Boyd 303
Office Hours: Tuesday 7am – 12pm and 1pm – 2pm. Thursday 7am – 8am, 9am – 11am and 1pm – 2pm.

Hours Credit: 3 hours

Prerequisites: None

Course Description: This course is for students needing practical, comprehensive instruction, with a focus on life applications, college level study abilities, and clear understanding of mathematics for additional coursework, careers and everyday living.


Dominant Discourse Learning Outcomes: Students should be able to do the following:
1. Strengthen their understanding of mathematical ideas.
2. Use appropriate mathematical vocabulary, language, symbols, etc.
3. Apply mathematical methods and use mathematical models to solve authentic problems.
4. Reason quantitatively and employ quantitative skills to critique mathematical arguments.
5. Understand mathematics literacy and implications associated with it.
6. Develop a deeper understanding of the pervasiveness of mathematics in college, career fields, and everyday life.

Critical and Metacognitive Learning Outcomes:
1. Learners will become empowered by taking charge of their own meaning making.
2. Learners will gain empowerment from knowledge and social relations that dignify one’s own history, language, and cultural traditions. During this process, students will be able to interrogate and selectively appropriate those aspects of the dominant culture that will provide them with the basis for defining and transforming, rather than merely serving, the wider social order (Giroux & McLaren, 1996).
3. Learners should be inspired to re-conceptualize different ways of knowing that rupture entrenched epistemologies and foster participatory spaces for the sharing and production of knowledge, and the mobilization of agency to effect changes in the world (Leistyna & Woodrum, 1996).
4. Learners will achieve academic success (both mathematical power and what is needed to pass gatekeeper tests and/or obtain access to advanced mathematical courses and related careers if desired), sociopolitical consciousness, a sense of social agency, positive cultural and social identities (Gutstein, 2007).

Student Centered Learning Outcomes:
1. Students would like to investigate computers impact on the world.
2. Students would like to investigate mathematics applications in “everyday life”.
3. Students would like to investigate the following question: What is quantitative reasoning?
4. Students want to develop problem solving skills.

Grade Composition:
- 50% from in-class exams
- 10% from concept map assignments
- 05% from in-class quizzes and assignments
- 10% from projects
- 25% from final exam
- Final Grade: $0 \leq F < 60 \leq D < 70 \leq C < 80 \leq B < 90 \leq A$

Exams: In addition to the final exam, there will be 4 in-class exams. Please see the attached course schedule for dates of the exams. Students may be able to reschedule exams if they have informed the instructor at least one class meeting prior to the exam of their situation. Students will not be allowed to make up missed exams.

Concept Map Assignments: Concept map assignments will be due throughout the semester and must be submitted into their assigned dropboxes in CourseDen. Please see the course calendar for the due dates of these assignments. Past due submissions will not be accepted for credit.

In-Class Quizzes and Assignments: Students must attend class the day of an in-class quiz or assignment in order to receive credit. Students will not be allowed to make up missed in-class quizzes or assignments.

Projects: Throughout the semester, we will engage in 2 projects. The purpose of these projects will be to investigate possible ways that we can use mathematics to help us understand and make meaning in the world, or read the world around us, in order to become critical agents in the world, or write the world around us. Please see the course calendar for details and due dates for these projects.

Topics of Projects:
1. Institutional racism, bureaucracy, and Going West.

Final Exam: There will be no make-up Final Exam. Students needing accommodations for the final exam must notify the instructor at least one week prior to the scheduled exam date.

CourseDen: Course materials will be posted on CourseDen. Please check CourseDen often for updates. You may log in to CourseDen at www.westga.edu or http://webct.westga.edu. If you are having problems logging into CourseDen, please go to http://uwgonline.westga.edu/students.php or call 678-839-6248

Disabilities: Students with documented disabilities (through West Georgia’s Accessibility 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).

**Academic Honesty:** You are expected to achieve and maintain the highest standards of academic honesty and excellence as described in the Undergraduate Catalog. In short, be responsible and do your own work.

**Classroom Conduct:** Students are expected to be respectful and mindful of each other. Students disturbing or interfering with instruction will be asked to leave.

**Mathematics Tutoring Center:** The Mathematics Tutoring Center (MTC) is located in room 205 Boyd. The MTC is open Monday – Friday, and students may get assistance in any of their math courses. No appointments are needed for the MTC.

**MATH 1001: Spring 2015 Course Calendar**

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topics</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 5 – Jan. 11</td>
<td>(1) Introduction, syllabus, and what is a concept?</td>
<td>Quiz over syllabus due by class time of Jan. 12</td>
</tr>
<tr>
<td></td>
<td>(2) Inductive and Deductive Reasoning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Estimation, Graphs, and Mathematical Models</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Problem Solving</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Basic Set Concepts</td>
<td></td>
</tr>
<tr>
<td>Jan. 19 – Jan. 25</td>
<td>(1) Investigating Project 1/ Subsets</td>
<td>First response paper for project 1 due by class time of Jan 26</td>
</tr>
<tr>
<td></td>
<td>(2) Venn Diagrams and Set Operations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Venn Diagrams and Set Operations with 3 Sets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Review for Exam 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Exam 1</td>
<td></td>
</tr>
<tr>
<td>Feb. 2 – Feb. 8</td>
<td>(1) Danger of a single story/Statements</td>
<td>Outline for project 1 due by class time of Feb. 9</td>
</tr>
<tr>
<td></td>
<td>(2) Compound Statements and Connectives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Truth Tables for Negation, Conjunction, and Disjunction</td>
<td></td>
</tr>
<tr>
<td>Feb. 9 – Feb. 15</td>
<td>(1) Truth Tables for Conditional and Biconditional</td>
<td>In mathematics, what does it mean to model? Concept map due by Feb. 15 at 11:59 pm. Submit through CourseDen dropbox.</td>
</tr>
<tr>
<td></td>
<td>(2) Equivalent Statements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Perspectives of Project 1/Percent, Sales Tax, and Discounts</td>
<td></td>
</tr>
<tr>
<td>Date Range</td>
<td>Topics</td>
<td>Notes</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Feb. 16 – Feb. 22| (1) Income Tax  
(2) Simple Interest/Investigating Project 2  
(3) Compound Interest | Final paper due for project 1 by class time of Mar. 2                  |
| Feb. 23 – Mar. 1 | (1) Annuities and Methods of Saving  
(2) Review for Exam 2  
(3) Exam 2         | Are numbers real? Concept map due by Mar. 8 at 11:59 pm. Submit through CourseDen Dropbox. |
| Mar. 2 – Mar. 8  | (1) Fundamental Counting Principle  
(2) Can we know truth?  
(3) Permutations/Combinations | First response paper for project 2 due by class time of Mar. 23       |
| Mar. 9 – Mar 15  | (1) Investigating Project 2/Fundamentals of Probability  
(2) Probability with Fundamental Counting Principle, Permutations, and Combinations  
(3) Review for Exam 3 | |
The instructor reserves the right to make changes to this course schedule. It is the student's responsibility to make note of these changes as announced in class.

Students, please carefully review the following information at this link http://www.westga.edu/assetsDepr/vpaa/Common_Language_for_Course_Syllabi.pdf It contains important material pertaining to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

**Important Dates**

- Jan. 19: MLK No class
- Jan. 30: Exam 1
- Feb. 27: Exam 2
- Feb. 27: Last day to withdraw with grade of W
- Mar. 16 – Mar. 20: Spring Break
- Mar. 23: Exam 3
- Mar. 27: Mat 1 Day No mathematics classes
- Apr. 13: Exam 4
- Apr. 20, 8am - 10:30am: Final Exam

**References**


Gutstein, Eric (2007). “So one question leads to another”: Using mathematics to develop a pedagogy of questioning. In Na’ïlah S. Nasir and Paul Cobb (Eds.), *Improving access to mathematics: Diversity and equity in the classroom* (51-68), New York, New York: Teachers College Press