MATH 1332: Contemporary Math (Quantitative Reasoning)
Brookhaven College

Instructor Information
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Course Information
Course Title: Contemporary Math (Quantitative Reasoning)
Course Number: MATH 1332
Section Number: 23011
Semester/Year: Spring 2020
Credit Hours: 3
Class Meeting Time/Location: TR 1:30-2:50, Room 134 in the K building
Certification Date: February 3, 2020
Last Day to Withdraw: April 16, 2020. A student is responsible for withdrawing from a course. Please talk to your Instructor, Advisor, Veteran’s Affairs Official and Financial Aid Official, as appropriate, before making the decision to withdraw from any course.

Course Prerequisites
Prerequisite **Required** College level ready in Mathematics at the non-algebra or algebra levels.

Course Description
Course Description: Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense,
proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered. (3 Lec.)

Student Learning Outcomes
Upon successful completion of this course, students will:
1. Apply the language and notation of sets.
2. Determine the validity of an argument or statement and provide mathematical evidence.
4. Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems.
5. Interpret and analyze various representations of data.
6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

Texas Core Objectives
The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills** - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. **Personal Responsibility** - to include the ability to connect choices, actions, and consequences to ethical decision-making
6. **Social Responsibility** - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities
Required Course Materials

**ISBN** 9780135222249

A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**Important:** You must purchase an access code for MyMathLab, which includes access to the textbook online. Having a paper copy of the textbook is optional. If you purchase MyMathLab online, be sure to purchase a subscription for at least 18 weeks.

**Computer with Internet Access:**
In this course, we will be using [MyMathLab](https://www.mymathlab.com) (or MyLab Math), an interactive software where you can access the textbook and you will be completing online homework and quizzes. It is highly recommended that you have a personal computer with internet access to complete the online assignments. There are also computers on campus for your use, including computers in the STEM Resource Lab (K142), the J-Lab (J122), and in the library.

The MyMathLab course ID for this course is **smith06316**. When you sign up online for MyMathLab, you can request temporary access but will only have access from the first day of the semester through day 14. After this point, you must enter a valid MyMathLab student access code. If the access code is not entered by that day, access to all online assignments will be suspended. Students should have permanent access to MyMathLab by the end of the first test.

When you first use MyMathLab, you may need to install standard plug-ins to use some of the features in MyMathLab.

**Calculator:** A scientific calculator is required for this course. The TI30XS Multiview calculator is highly recommended. You will need to be able to enter complex formulas into your calculator, which can easily be done on the TI30XS Multiview.
Graded Work

The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.

Summary of Graded Work

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>MyMathLab Homework</td>
<td>33 assignments worth 100 points each</td>
<td>10%</td>
</tr>
<tr>
<td>MyMathLab Quizzes</td>
<td>11 quizzes worth 100 points each</td>
<td>10%</td>
</tr>
<tr>
<td>Tests</td>
<td>4 tests worth 100 points each</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>1 final worth 100 points</td>
<td>20%</td>
</tr>
</tbody>
</table>

**TOTAL: 100%**

Final Grade

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>0-59%</td>
<td>F</td>
</tr>
</tbody>
</table>

Description of Graded Work

**Homework:** Each section covered will have a homework assignment in MyMathLab for the student to complete outside of class. Each problem will allow 3 attempts, then the student will be able to use the “Similar Question” feature to get a new problem to attempt. The student will have the ability to get a perfect 100 on every homework assignment with the “Similar Question” feature. Homework will count for 10% of your course average.

**Quizzes:** The unit quizzes in MyMathLab must be completed within a 60-minute time-limit. You will be allowed two attempts at the quiz and your highest score will be counted towards your final course grade. Quizzes will count for 10% of your course average.

**Tests:** You will have 4 tests worth 100 points each. Tests will be taken in the Brookhaven Testing Center. Each test will count for 15% of your course average.
Final Exam: The final exam is a 33 question multiple choice test. The final exam will be taken in the assigned classroom for the course. Students will need an Appearson form number 28500 and will use the GREEN side only for their test. The final exam will count for 20% of the course average.

Attendance and Your Final Grade
You will have the opportunity to replace the score earned on Test 1, 2, 3, or 4 with the score earned on the final exam if you have four or less absenses or you have an average of at least 80% on all homework assignments.

Late Work Policy
Homework or quizzes that are completed late will receive ½ credit up to the test due date. No credit will be awarded after the test due date. Unless there are special circumstances, students will not be allowed to take a test after the test due date.

Classroom Expectations
Students are expected to adhere to the Code of Student Conduct as stated in the Student Handbook. It is very important to me that we have a great classroom environment in which I can teach and students can learn. I expect students to be respectful of me (your instructor) and one another. During class, I expect students to be focused on class work and not on other distractions, such as cell phones and inappropriate “chit-chat.”

Institutional Policies
Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.

Brookhaven Institutional Policies
<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Assignments in MyMathLab</th>
<th>Due Dates</th>
</tr>
</thead>
</table>
| 1   | Introduction to MATH 1332  
1.1 Inductive and Deductive Reasoning | Orientation (optional)  
1.1 | Sun. 1/26 |
| 2   | 1.2 Estimation, Graphs, and Mathematical Models  
1.3 Problem Solving | 1.2  
1.3 Quiz #1(1.1-1.3) | Sun. 1/26 |
| 3   | 4.1 Equations of lines and Modeling  
4.2 Number Bases in Positional Systems | 4.1  
4.2 | Sun. 2/2 |
| 4   | 4.4 Looking Back at Early Numeration Systems | 4.4 Quiz #2 (4.1-4.4, 4.3) | Sun. 2/2 |
| 5   | 5.1 Number Theory: Prime and Composite Numbers  
5.2 The Integers: Order of Operations | 5.1  
5.2 | Sun. 2/9 |
| 6   | 5.3 The Rational Numbers  
5.6 Exponents and Scientific Notation | 5.3  
5.6 Quiz #3 (5.1 -5.3, 5.6) | Sun. 2/9 |
| 7   | Test 1 Review | Test 1 in BHC Testing Center | Sat. 2/15 |
| 8   | 8.1 Percent, Sales Tax, and Discounts  
8.3 Simple interest | 8.1  
8.3 | Mon. 2/17 |
| 9   | 8.4 Compound Interest | 8.4 Quiz #4 (8.1, 8.3 -8.4) | 2/23 |
| 10  | 8.5 Annuities, methods of Savings, and Investments  
8.6 Cars | 8.5  
8.6 | 2/23 |
<p>| 11  | 8.8 Credit Cards | 8.8 Quiz #5 (8.5 -8.6. 8.8) | 3/1 |</p>
<table>
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<th>Topic</th>
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</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Test 2 Review</td>
<td>Test 2 in BHC Testing Center</td>
<td>Sat. 3/7</td>
</tr>
</tbody>
</table>
| 13  | 2.1 Basic Set Concepts  
2.2 Subsets | 2.1 
2.2 | Mon. 3/9 |
| 14  | 2.3 Venn diagrams and Set Operations | 2.3 Quiz #6 (2.1 – 2.3) | Sun. 3/15 |
| 15  | 2.4 Set Operations and Venn Diagrams With Three Sets | 2.4 | Sun. 3/15 |
| 16  | 2.5 Survey Problems | 2.5 Quiz #7 (2.4 – 2.5) | Thurs. 3/26 |
| 17  | Venn Diagram CORE Quiz in Class | | Thurs. 3/26 |
| 18  | 3.1 Statements, Negations, and Quantified Statements | 3.1 | Sun. 4/5 |
| 19  | 3.2 Compound Statements and Connectives | 3.2 | Sun. 4/5 |
| 20  | 3.3 Truth tables for the Negation, Conjunction, and Disjunction | 3.3 Quiz #8 (3.1 – 3.3) | Sun. 4/12 |
| 21  | Test 3 Review | Test 3 in BHC Testing Center | Mon. 4/13 |
| 22  | 11.1 The Fundamental Counting Principle  
11.4 Fundamentals of Probability | 11.1 
11.2 | Sun. 4/19 |
| 23  | 11.6 Events Involving Not and Or; Odds  
11.7 Events Involving And; Conditional Probability | 11.6 
11.7 Quiz #9 (11.1-11.2, 11.6-11.7) | Sun. 4/19 |
<p>| 24  | 12.1 Sampling, Frequency Distributions, and Graphs | 12.1 | Sun. 4/26 |</p>
<table>
<thead>
<tr>
<th>Day</th>
<th>Topic</th>
<th>Assignments in MyMathLab</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>12.2 Measures of Central Tendency 12.3 Measures of Dispersion</td>
<td>12.2 12.3</td>
<td>Sun. 4/26</td>
</tr>
<tr>
<td>26</td>
<td>12.4 The Normal Distribution</td>
<td>12.4 Quiz #10 (12.1–12.4)</td>
<td>Sun. 5/3</td>
</tr>
<tr>
<td>27</td>
<td>Test 4 Review</td>
<td>Test 4 in BHC Testing Center</td>
<td>Mon. 5/4</td>
</tr>
<tr>
<td>28</td>
<td>13.1 Voting Methods (will test on Final Exam)</td>
<td>13.1</td>
<td>Sun. 5/10</td>
</tr>
<tr>
<td>29</td>
<td>Review for Final Exam</td>
<td>MyMathLab Review Assignment</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Final Exam taken IN Classroom Given as per the Final Exam Schedule</td>
<td></td>
<td></td>
</tr>
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</table>

**Testing Deadlines**

<table>
<thead>
<tr>
<th>Test</th>
<th>Chapters Covered</th>
<th>Deadline</th>
</tr>
</thead>
</table>
| Test #1    | Chapter 1 Sections 1 – 3  
Chapter 4 Sections 1, 2, and 4  
Chapter 5 Sections 1, 2, 3, and 6 | Saturday 2/15  |
| Test #2    | Chapter 8 Sections 1, 3 - 6, and 8                      | Saturday 3/7   |
| Test #3    | Chapter 2 Sections 1 – 5  
Chapter 3 Sections 1 – 3                                  | Monday 4/13    |
| Test #4    | Chapter 11 Sections 1, 4, 6, 7  
Chapter 12 Sections 1 – 4                                 | Monday 5/4     |
| Final Exam | Comprehensive                                           | To Be Announced|