MATH 1332 COURSE SYLLABUS
CONTEMPORARY MATHEMATICS (QUANTITATIVE REASONING)
BROOKHAVEN COLLEGE
MATH/SCIENCE DIVISION

ISBN: 9780321923202
The book is available in the Brookhaven College Bookstore or online at www.brookhavencollege.edu choose bookstore.

SOFTWARE: This course will run using an interactive software called MyMathLab. MyMathLab is online, textbook-based software where you will complete quizzes and homework. Students must have access to a computer with Internet to complete the required work for this course. Standard plug-ins are needed to access this tool. The web address for MyMathLab is http://www.pearsonmylabandmastering.com. Students must purchase a new worktext which includes the access code.

To enroll into your MyMathLab course you will need a course ID which will be given to you by your instructor. 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 homework, quizzes and unit reviews will be suspended.

CATALOG DESCRIPTION:
This is a Texas Common Course Number. This is a Core Curriculum course selected by the colleges of DCCCD.

Prerequisite: College level ready in Mathematics at the non-algebra or algebra levels.

MATH 1332 Contemporary Mathematics (Quantitative Reasoning)
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.

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.

Revised Fall 2017
MATH 1332 is a Tier I course in the Quantitative Reasoning learning category. Knowledge and skills that are important to your success in other college courses will be introduced and reinforced in Tier I. The Quantitative Reasoning category promotes the application of mathematics to increase your ability to solve “real-world” problems. When you are quantitatively literate, you can use logic and critical thinking in new ways. www.dcccd.edu/core

Core Objectives:

MATH 1332 is part of the Mathematics Foundational Component Area 020.

i. Courses in this category focus on quantitative literacy in logic, patterns, and relationships.

ii. Courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

iii. MATH 1332 develops the following Core Objectives:

   - **Critical Thinking (CT)** – to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
   - **Communication (COMM)** – to include effective development, interpretation and expression of ideas through written and visual communication
   - **Empirical and Quantitative Skills (EQS)** – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

MATH 1332 develops Critical Thinking, Communication, and Empirical and Quantitative Skills by requiring students to solve and analyze applications to at least one of the following: sets, logic, number systems, number theory, functions, probability and statistics.

**CHAPTERS/UNITS COVERED:**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thinking Critically</td>
<td>All Sections</td>
</tr>
<tr>
<td>2</td>
<td>Approaches to Problem Solving</td>
<td>All Sections</td>
</tr>
<tr>
<td>3</td>
<td>Numbers in the Real World</td>
<td>All Sections</td>
</tr>
<tr>
<td>4</td>
<td>Managing Money</td>
<td>All Sections</td>
</tr>
<tr>
<td>5</td>
<td>Statistical Reasoning</td>
<td>All Sections</td>
</tr>
<tr>
<td>6</td>
<td>Putting Statistics to Work</td>
<td>All Sections</td>
</tr>
<tr>
<td>7</td>
<td>Probability: Living with the Odds</td>
<td>7A-7D</td>
</tr>
<tr>
<td>12</td>
<td>Mathematics &amp; Politics</td>
<td>12A-12D</td>
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</table>

Revised Fall 2017
This class meets online from December 8, 2017 to January 7, 2018. For special help students are encouraged to come to the Math Lab, K137. Lab hours are posted on the door of K137.

INSTITUTIONAL POLICIES

DROP/WITHDRAWAL POLICY: Withdrawing from a course is a formal procedure which YOU must initiate; the instructor cannot do it for you. You may withdraw from a class in either the Admissions office or Advising Center. If you stop attending or are unable to complete this class and you do not withdraw before the official drop date, January 2, 2018, you will receive a performance grade, usually a grade of “F.” Students sometimes drop a class when help is available that would enable them to continue. Please discuss your plans with the instructor if you feel you need to withdraw.

FINANCIAL AID STATEMENT: Failure to attend classes could result in a loss of Financial Aid (FA). If you are receiving any form of financial aid, you should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate after the drop date are also subject to this policy.

FINANCIAL AID CERTIFICATION of ATTENDANCE: You must attend and participate in your on-campus and online course(s) in order to receive federal financial aid. Your instructor is required by law to validate your attendance and participation. In an online course, you must participate in an academic related activity pertaining to the course in order for your attendance to be validated. Simply logging-in is not sufficient by itself to demonstrate academic attendance. You must demonstrate that you are participating in your online class and engaged in an academically related activity by the certification date. The academic related activity used to validate online course participation is at the discretion of your instructor.

This statement of certification of attendance applies to all students enrolled regardless of whether they are receiving financial aid or not. All students must be certified.

ADA STATEMENT: If you feel you may need special assistance or accommodation (such as help with taking notes, extra time on tests, etc.) because of any type of physical disability or learning difference, please contact the Special Services office in Room S136 or at 972-860-4673.

You can find more information regarding the institutional policies listed above for Brookhaven College by visiting: https://www.Brookhavencollege.edu/syllabusaddendum. Information regarding the topics listed below can also be found by visiting this site.

- Six Drop Rule
- Repeating this Course
- International Students
- Religious Holidays
- Academic Integrity
- Grade Reports
- Family Educational Rights and Privacy Act (FERPA)
- Institutional Equity
- Instructors Right to Modify

Revised Fall 2017
Classroom Expectations
To ensure the support of a positive learning community, it is important that our classroom is one that is an environment conducive to learning and appropriate etiquette. Because disruptive behaviors can sometimes become an issue, your instructor has established a policy that will include but may not be limited to the following. Students exhibiting disruptive behavior will be given a warning. If the behavior continues, students will be asked to leave the class. The student must meet with the instructor before he/she can return to class. Examples of disruptive behavior include, but are not limited to, talking while the instructor is teaching, discussing non-mathematical issues during class, coming to class late, leaving class early, using profane language, sleeping, using food, and/or tobacco products, etc.

Cell phones ringing during class, text messaging during class, and surfing the internet for information not related to the lesson are also examples of rude and disrespectful behaviors. Please turn off cell phones or put them on vibrate when entering the classroom. If you receive an emergency call, please step outside of the classroom to take the call.

You may or may not have experience with struggling in mathematics. Struggle is important, because struggling indicates learning. If struggle is not taking place, you are not being challenged and are not gaining new knowledge and skills. However, struggle that is unproductive often turns into frustration. This course is designed to promote constructive perseverance. This means that you are supported in persisting through struggle.

You will read and use authentic text, which is defined as text that comes from a real-world source, or has been written by an author to replicate a real-life source. Using authentic text directly affects engagement and thus the development of skills in reading quantitative information in a variety of real-world situations. You will write in class and for assignments in order to make sense of quantitative information and processes, especially in relationship to a context, develop skills in communicating quantitative information and provide one form of assessment by which you may demonstrate your understanding of the course material.

Repeating This Course
Each college of the DCCCD charges additional tuition to students registering the third or subsequent time for a course. All third and subsequent attempts of the majority of credit and continuing education/workforce training courses will result in additional tuition being charged. Developmental Studies and some other courses will not be charged a higher tuition rate. Third attempts included courses taken at any of the DCCCD colleges since the Fall 2002 semester.

https://www1.dcccd.edu/catalog/ss/oep/third_attempt.cfm?loc=econ

Study Expectations: Additional time outside, completing homework assignments and quizzes, preparing for exams, and going to the Math Lab at least one hour per week are expected. In general, you should set aside spend 6 to 9 hours outside of class per week completing assignments and studying content for this course.

EVALUATION PROCEDURES
Assignments: The homework assignments and quizzes for this course will be completed inside of the MyMathLab classroom. These assignments may be done anywhere the student has internet access including the Brookhaven Math Lab. Additional offline assignments may be assigned at the discretion of the instructor. All assignments will be accepted until the date and time specified on the course calendar. Assignments not submitted by the final submission deadline as specified by your instructor will receive a grade of zero. All tests will be taken in the testing center.
Grading Procedures: Assessment of your performance will be based upon scores from four exams, homework, online quizzes, in-class quizzes and activities, lab attendance and a comprehensive departmental final exam. Your overall numerical score will be calculated based on the weighted scale below:

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<table>
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<tbody>
<tr>
<td><strong>Homework Assignments</strong></td>
<td>10%</td>
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<tr>
<td><strong>Quizzes</strong></td>
<td>10%</td>
</tr>
<tr>
<td><strong>Unit Exams (average of 4 exams)</strong></td>
<td>60%</td>
</tr>
<tr>
<td><strong>Comprehensive Final Exam</strong></td>
<td>20%</td>
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Your final grade will be determined using the following scale:

90 to 100  A  
89 to 80   B  
79 to 70   C  
69 to 60   D  
59 and below  F  

You will have the opportunity to replace the scored earned on Test 1, 2, 3, or 4 with the score earned on the final exam if you have an average score of at least 90% on all homework assignments.

Calculators are allowed in this course. A scientific calculator is recommended. NO TI-89 OR TI-92 OR TI-NSPIRE allowed.

If tests are administered in the Testing Center room S080. Cell phones and pagers are NOT allowed in the Testing Center. Permission Slips will be issued, by the instructor, prior to the test. Students must have a permission slip to take the test in the Testing Center. The Permission slips will contain the testing code, due date, and information on testing times in the Testing Center.

Incomplete grades are given when an unforeseen emergency prevents a student from completing the work in a course. The division Dean must approve all “I” grades.

IMPORTANT DATES FOR Winter 2017-2018 ACADEMIC SEMESTER:

- December 8 (F)  Class starts
- December 12 (T)  Certification Day
- January 2 (T)  Drop Date
- Dec 22-Jan 2 (F-T)  College buildings and offices closed for the holidays at end of workday
- December 26-27  eCampus Maintenance time
- January 2 (T)  College buildings and offices open -- staff and administrators return to work.
- January 7 (S)  Semester Ends

COURSE CALENDAR


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Please note that the instructor reserves the right to modify this course syllabus, assignments, grading procedures, and other related policies as circumstances so dictate. Students will be notified via email of any changes that are to be made.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPICS</th>
<th>ASSIGNMENT DEADLINE</th>
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<tbody>
<tr>
<td></td>
<td><strong>Unit I: Logic &amp; Problem Solving</strong></td>
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</tbody>
</table>
| 1   | Dec 8-15 | Course Orientation (syllabus & MyMathLab)  
1A: Living in the Media Age  
1B: Propositions and Truth Values  
1C: Sets and Venn Diagrams  
1D: Analyzing Arguments  
1E: Critical Thinking in Everyday Life  
2A: Working with Units  
2B: Problem Solving with Units  
2C: Problem Solving Guidelines and Hints  
Exam I Review (Chapters 1 & 2) | All homework and quizzes due by end of day Friday, December 15th  
Test 1 due in Respondus by end of day Saturday, December 16th |
|     | **Unit II: Quantitative Information in Everyday Life** | |
| 2   | Dec 16-22 | 3A: Uses and Abuses of Percentages  
3B: Putting Numbers into Perspective  
3C: Dealing with Uncertainty  
3D: Index Numbers: The CPI and Beyond  
3E: How Numbers Can Deceive  
4A: Taking Control of Your Finances  
4B: The Power of Compounding  
4C: Savings Plans and Investments  
4D: Loan Payments, Credit Cards, and Mortgages  
4E: Income Taxes  
Test 2 Review (Chapters 3 & 4) | All homework and quizzes due by end of day Friday, December 22nd  
Test 1 due in Respondus by end of day Saturday, December 23rd  
(If taking test on campus, it must be taken no later than Friday, December 22nd) |
|     | **Unit III: Statistics** | |
| 3   | Dec 22-Jan 2 | 5A: Fundamentals of Statistics  
5B: Should You Believe a Statistical Study?  
5C: Statistical Tables and Graphs  
5D: Graphs in the Media  
5E: Correlation and Causality  
6A: Characterizing Data  
6B: Measures of Variation  
6C: The Normal Distribution  
Exam #3 Review (Chapters 5 & 6) | All homework and quizzes due by end of day Tuesday, January 2nd  
Test 1 due in Respondus by end of day Wednesday, January 3rd  
(I suggest you get ahead because that leaves 3 days for the last section) |
|     | **Unit IV: Probability** | |
| 4   | Jan 3-5 | 7A: Fundamentals of Probability  
7B: Combining Probabilities  
7C: The Law of Large Numbers  
7D: Assessing Risk  
12A: Voting: Does the Majority Always Rule?  
12B: Theory of Voting  
Exam #4 Review (Chapters 7, 12A & 12B) | All homework and quizzes due by end of day Saturday, January 5th  
Test 1 due in Respondus by end of day Sunday, January 6th |
|     | Jan 7 | Final Exam Review | Final exam due in Respondus by end of day Sunday, January 7th  
(If taking test on campus it must be taken no later than Saturday, January 6th) |

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