Midland College Syllabus
2018-2019
MATH 1332
Quantitative Reasoning
3 Semester Credit Hours
(3 Lecture/0 Lab)
Core Curriculum Course

Instructor Information:
Instructor: Click here to enter text.  
Office: Click here to enter text.
Phone: Click here to enter text.  
Email: Click here to enter text.
Office Hours: Click here to enter text.

Notice: Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity may be reported as never attended and dropped from the course.

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 communications should be embedded throughout the course. Additional topics may be covered.

A final project applying the techniques and analysis described in the above course description is required.

Core Objectives:
This course fulfills the three-hour Mathematics requirement in the Midland College Core Curriculum. The Core Curriculum is a set of courses that provide students with a foundation of knowledge, skills and educational experiences that are essential for all learning. The Core Curriculum is available in the Midland College Catalog. As part of the core, this course addresses the following three objectives:

Critical Thinking Skills – Students will demonstrate critical thinking skills by analyzing and applying concepts of sets, logic and statistical reasoning to mathematical situations in course assignments and exams.

Communication Skills – Students will demonstrate communication skills in written, oral, and visual form within the classroom setting in the areas of sets, logic, finance, statistics and probability through instructor posed questions, collaborative peer assignments, and exams.
Empirical and Quantitative Skills – Students will demonstrate empirical and quantitative skills by analyzing real-world applications of functions, financial management, and probability through course assignments and exams.

Text, References and Supplies:
- Bennett and Briggs, Using and Understanding Mathematics with MyMathLab Integrated Review, 7th ed, Pearson
- MyMathLab Access Code only
- Scientific calculator
- Computer access is required.
- MyMathLab code is required by some instructors.

Student Learning Outcomes

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 problem from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

Student Contributions, Responsibilities and Class Policies:
Students will be expected to comply with the policies outlined in the Midland College student handbook. Instructor policies concerning attendance and academic behavior are consistent with the policies in the student handbook. Regular attendance is required to do well in this class. Students will be evaluated based on the results of examinations given throughout the semester.

Attendance Policy:
It is the responsibility of the students to know the policies and procedures associated with absences. These policies are set by instructors. Excused absences may include, but are not limited to, illness, severe weather, and death in the family. Instructors will determine whether or not an absence is excused. Please visit the Midland College Catalog.

Your lecture instructor will inform you on the first day of class as to the tentative dates and content for each exam. Students are expected to complete each exam. Your instructor will inform you on the first day of class as to make-up procedures for missed exams and any exemption procedures if they apply (See Instructor Handout).
Withdrawal Policy:
Students who have enrolled in a Texas public institution of higher education as a first-time freshman in fall 2007 or later are permitted to drop no more than six courses during the entire undergraduate career. This limit includes all transfer work taken at a Texas institution of higher education and to second baccalaureate degrees. This statute was enacted by the State of Texas in spring 2007 (Texas Education Code 51.907). Any course that a student drops after Census Day is counted toward the six-course limit if “(1) the student was able to drop the course without receiving a grade or incurring an academic penalty; (2) the student’s transcript indicates or will indicate that the student was enrolled in the course; and (3) the student is not dropping the course in order to withdraw from the institution.” Please visit the Midland College Catalog.

Scholastic Dishonesty:
Midland College does not tolerate scholastic dishonesty or academic misconduct in any form.
Please read the MC Student Handbook on this subject.
Please visit the Midland College Catalog.

Evaluation of Students:
Students will be evaluated based on grades that may include the following but are not limited to:

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<thead>
<tr>
<th>Assessments</th>
<th>Percentage of Grade</th>
<th>Grade Range</th>
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<tbody>
<tr>
<td>Exams</td>
<td>55-80%</td>
<td>90-100 A</td>
</tr>
<tr>
<td>Quizzes/Assignments</td>
<td>0-10%</td>
<td>89-80 B</td>
</tr>
<tr>
<td>Reading/Written Assignments</td>
<td>0-10%</td>
<td>79-70 C</td>
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<tr>
<td>Final Exam</td>
<td>20-25</td>
<td>69-60 D</td>
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<td>59-0 F</td>
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Course Schedule:
This class meets for 3 contact hours per week. For a specific schedule of the class meetings and material to be covered during those meetings, please refer to the schedule distributed to each student on the first class meeting (See Instructor Handout).

Course Outline:
Chapter 2: Approaches to Problem-Solving
- 2A Understand, Solve, and Explain
- 2B Extending Unit Analysis
- 2C Problem-Solving Hints

Chapter 3: Numbers in the Real World
- 3A Uses and Abuses of Percentages
- 3B Putting Numbers in Perspective
• 3E How Numbers Can Deceive: Polygraphs, Mammograms, and More

Chapter 4: Managing Money
• 4A Taking Control of Your Finances
• 4B The Power of Compounding
• 4C Savings Plans and Investments
• 4D Loan Payments, Credit Cards, and Mortgages

Chapter 8: Exponential Astonishment
• 8A Linear vs Exponential Growth

Chapter 5: Statistical Reasoning
• 5A Fundamentals of Statistics
• 5B Should You Believe a Statistical Study
• 5C Statistical Tables and Graphs
• 5D Graphics in the Media
• 5E Correlation and Causality

Chapter 6: Putting Statistics to Work
• 6A Characterizing Data
• 6B Measures of Variation

Chapter 1: Thinking Critically
• 1A Living in the Media Age
• 1C Sets and Venn Diagrams
• 1E Critical Thinking in Everyday Life

Chapter 7: Probability: Living with the Odds
• 7A Fundamentals of Probability

Essays
Chapter 11: Mathematics and the Arts
• 11A Mathematics and Music
• 11B Perspective and Symmetry

ADA Statement:
Midland College provides services for students with disabilities through Student Services.
In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. More information can be found at Student Services-Disability Services or by contacting the Midland College Disability Specialist at 685-4505.

Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.
Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. For further information on notice of non-discrimination, visit http://wdcrobp01.ed.gov/CFAPPS/OCR/contactus.cfm or call 1 (800) 421-3481.

Spanish

Midland College no discrimina por motivos de raza, color, nacionalidad, sexo, discapacidad, o edad en sus programas o actividades. Las siguientes personas han sido designadas para responder a cualquier pregunta o duda sobre estas políticas no discriminatorias: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. Para más información sobre estas políticas no discriminatorias , visite http://wdcrobp01.ed.gov/CFAPPS/OCR/contactus.cfm o llame al 1 (800) 421-3481.

Math/Science Division Information:
Division Dean: Dr. Margaret Wade 125 AHSF (432) 685-4615
Department Chair: Dr. Sonia Ford 110 AHSF (432) 685-4525
Division Secretary: Mrs. Carol Pritchard 124 AHSF (432) 685-6404
Division Clerk: Ms. Sarah Anderson 124 AHSF (432) 685-6896

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