

Midland College Syllabus

2021-2022

MATH 1332

Quantitative Reasoning

3 Semester Credit Hours

(3 Lecture/0 Lab)

Core Curriculum Course

Instructor Information:

Instructor: [Click here to enter text.](#)

Phone: [Click here to enter text.](#)

Office Hours: [Click here to enter text.](#)

Office: [Click here to enter text.](#)

Email: [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:

- Bolker, E. D., and Mast, M. B., Common Sense Mathematics, 2nd ed, American Mathematical Society
 - ISBN: 978-1-4704-6143-8
- Scientific calculator
- Computer access is required.

Student Learning Outcomes:

1. Apply the language and notation of sets.
2. Determine the validity of an argument or statement and provide mathematical evidence.
3. Solve problems in mathematics of finance.
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 Catalog](#). Instructor policies concerning attendance and academic behavior are consistent with the policies in the student handbook.

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:

Assessments	Percentage of Grade	Grade Range
Assignments	10%	90-100 A
Projects/Essays	45%	89-80 B
Exams	20%	79-70 C
Final Exam	25%	69-60 D
		59-0 F

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 1: Calculating the Back of an Envelope

Chapter 2: Units and Unit Conversion

Chapter 3: Percentages, Sales Tax, and Discounts

Chapter 4: Inflation

Chapter 5: Average Values

Chapter 6: Income Distribution – Spreadsheets, Charts, and Statistics

Chapter 7: Electricity Bills and Income Taxes – Linear Functions

Chapter 9: Compound Interest – Exponential Growth

Chapter 10: Borrowing and Saving

Chapter 11: Probability – Counting, Betting, Insurance

Chapter 12: Break the Bank – Independent Events

Chapter 13: How Good Is That Test?

Non-Discrimination Statement

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual has been designated to handle inquiries regarding the non-discrimination policies:

Tana Baker

Title IX Coordinator/Compliance Officer

3600 N. Garfield, SSC 131

Midland, Texas 79705

(432) 685-4781

tbaker@midland.edu

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

Americans with Disabilities Act (ADA) Statement:

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit www.midland.edu/accommodation and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.

Math & Science Division Information:

Division Office: AHSF 124

(432) 685-4561

Division E-Mail: mns@midland.edu

Department Chair: Dr. Krista Cohlmiia

(432) 685-4541

Dean: Dr. Miranda Poage

Secretary: Sarah Anderson

Clerk: Liliana Orcutt

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