Midland College Syllabus
2018 - 2019
MATH 1324 - WEB
Mathematics for Business & Social Sciences
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 will be reported as never attending and dropped from the course.

Course Description:
The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. Prerequisite: TSI complete in Math.

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 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 characteristics of linear, quadratic, polynomial, exponential and logarithmic functions, equations, and inequalities to construct graphs and tables, analyzing and applying linear programming and matrices to evaluate business, finance, economics and management application problems in course assignments, instructor created proctored exams, and a departmental final exam.

Communication Skills – Students will demonstrate communication skills in written, oral, and visual form within the classroom setting 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 linear, quadratic, polynomial, exponential and logarithmic equations and functions, and systems of equations using matrices with emphasis on finance, management, economics and business applications through course assignments, instructor created proctored exams, and a departmental final exam.

Text, References and Supplies:
- MyMathLab Access Code only
- Scientific Calculator
- Computer access may be required by some instructors.
- MyMathLab Access Code may be required by some instructors.

Student Learning Outcomes
Upon successful completion of this course, students will:
1. Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems.
2. Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.
3. Apply basic matrix operations, including linear programming methods, to solve application problems.
4. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.
5. Apply matrix skills and probability analyses to model applications to solve real-world problems.

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 catalog. Regular attendance is required to do well in this class.

Students will be evaluated based on the results of module assignments, online quizzes, a proctored Midterm Exam, and a proctored Final Exam given during the semester. Students are expected to complete each assignment.

Attendance Policy:
This course is conducted primarily online with the exception of at least one proctored exam that must be taken at a college or university testing center, or other approved location by the instructor. Students are expected to fully participate in the course by logging into Canvas at least twice per week. This is NOT a self-paced course. Refer to the *Midland College Catalog* for more information.
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 Student Rights & Responsibilities section in the Midland College Catalog for more information.

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

<table>
<thead>
<tr>
<th>Assessments</th>
<th>Percentage of Grade</th>
<th>Grade Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proctored Exams</td>
<td>70-100%</td>
<td>90-100 A</td>
</tr>
<tr>
<td>Module Assignments</td>
<td>0-30%</td>
<td>89-80 B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>79-70 C</td>
</tr>
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<td></td>
<td></td>
<td>69-60 D</td>
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<tr>
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<td></td>
<td>59-0 F</td>
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</tbody>
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Course Schedule:
This class meets for an equivalent of 3 contact hours per week. Students are not required to attend campus except to take at least one proctored exam at a college or university testing center, or other approved location by the instructor. For a tentative schedule of the class material to be covered, please refer to the schedule provided in Canvas.

Course Outline:
Functions and Graphs
  3.1 Functions
  3.2 Graphs of Functions
  3.3 Applications of Linear Functions
  3.4 Quadratic Functions and Applications
  3.5 Polynomial Functions
  3.6 Rational Functions
Exponential and Logarithmic Functions
   4.1 Exponential Functions
   4.2 Applications of Exponential Functions
   4.3 Logarithmic Functions
   4.4 Exponential and Logarithmic Equations

Mathematics of Finance
   5.1 Simple Interest and Discount
   5.2 Compound Interest
   5.3 Annuities, Future Value, and Sinking Funds
   5.4 Annuities, Present Value, and Amortization

Systems of Linear Equations and Matrices
   6.1 Systems of Two Linear Equations in Two Variables
   6.2 Larger Systems of Linear Equations
   6.3 Applications of Systems of Linear Equations
   6.4 Basic Matrix Operations
   6.5 Matrix Products and Inverses
   6.6 Applications of Matrices

Linear Programming
   7.1 Graphing Linear Inequalities in Two Variables
   7.2 Linear Programming: The Graphic Method
   7.3 Applications of Linear Programming

Sets and Probability
   8.1 Sets
   8.3 Introduction to Probability
   8.4 Basic Concepts of Probability

Counting, Probability Distributions, and Further Topics in Probability
   9.1 Probability Distributions and Expected Value

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.

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. More information can be found at Student Services-Disability Services or by contacting the Midland College Disability Specialist at 685-4505.

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://wdcrobcolp01.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://wdcrobcolp01.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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