

## Midland College Syllabus

2021 - 2022

MATH 1325 - WEB

Calculus for Business & Social Sciences

3 Semester Credit Hours

(3 Lecture/0 Lab)

### 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 will be reported as never attending and dropped from the course.

### Course Description:

This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. This course is not a substitute for MATH 2413, Calculus I. Prerequisite: A C or better in MATH 1314 College Algebra or a C or better in MATH 1324 Mathematics for Business and Social Sciences.

### Text, References and Supplies:

- Lial, Hungerford, Holcomb, and Mullins Mathematics with Applications, 12<sup>th</sup> ed., Pearson.
  - 978-0-135-90428-2 (18 weeks)
  - 978-0-134-85655-1 (24 weeks)
- MyMathLab Access Code only
- Scientific Calculator
- Internet access is required for this online course.
- MyMathLab Access Code is required.

### Student Learning Outcomes

Upon successful completion of this course, students will:

1. Apply calculus to solve business, economics, and social sciences problems.
2. Apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions.
3. Solve application problems involving implicit differentiation and related rates.
4. Solve optimization problems with emphasis on business and social sciences applications.
5. Determine appropriate technique(s) of integration.
6. Integrate functions using the method of integration by parts or substitution, as appropriate.
7. Solve business, economics, and social sciences applications problems using integration techniques.

### **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 Midterm Exam(s), and a comprehensive Final Exam given during the semester. Students are expected to complete each assignment. At least 70% of the course grade will come from proctored assignments.

### **Attendance Policy:**

This course is conducted online. 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:

<b>Assessments</b>	<b>Percentage of Grade</b>	<b>Grade Range</b>
Module Assignments	70-100%	90-100 A
Midterm Exams	0-30%	89-80 B
Final Exam	20-25%	79-70 C
		69-60 D
		59-0 F

### **Course Schedule:**

This class meets for an equivalent of 3 contact hours per week. For a tentative schedule of the class material to be covered, please refer to the schedule provided in Canvas.

## **Course Outline:**

### Chapter 11 – Differential Calculus

- 11.1 Limits
- 11.2 One-Sided Limits and Limits Involving Infinity
- 11.3 Rates of Change
- 11.4 Tangent Lines and Derivatives
- 11.5 Techniques for Finding Derivatives
- 11.6 Derivatives of Products and Quotients
- 11.7 The Chain Rule
- 11.8 Derivatives of Exponential and Logarithmic Functions
- 11.9 Continuity and Differentiability

### Chapter 12 - Applications of the Derivative

- 12.1 Local Extrema
- 12.2 The Second Derivative
- 12.3 Optimizations Applications
- 12.4 Implicit Differentiation
- 12.5 Related Rates
- 12.6 Curve Sketching

### Chapter 13 Intergral Calculus

- 13.1 Antiderivatives
- 13.2 Integration by Substitution
- 13.3 Integration by Parts
- 13.4 Area and the Definite Integral
- 13.5 The Fundamental Theorem of Calculus
- 13.6 Applications and Integrals

### Chapter 14 - Multivariate Calculus

- 14.1 Functions of Several Variables
- 14.2 Partial Derivatives
- 14.3 Extrema of Functions of Several Variables
- 14.4 Lagrange Multipliers

## **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](mailto: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](http://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](mailto:mns@midland.edu)

Department Chair: Dr. Krista Cohlmlia (432) 685-4541  
Dean: Dr. Miranda Poage  
Secretary: Sarah Anderson  
Clerk: Liliana Orcutt

## Contents

Midland College Syllabus.....	1
Instructor Information: .....	1
Instructor: .....	1
Phone: .....	1
Office Hours: .....	1
Notice: .....	1
Course Description:.....	1
Text, References and Supplies: .....	1
Student Learning Outcomes .....	1
Student Contributions, Responsibilities and Class Policies: .....	2
Attendance Policy: .....	2
Withdrawal Policy: .....	2
Scholastic Dishonesty: .....	2
Evaluation of Students: .....	2
Course Schedule:.....	2
Course Outline: .....	3
ADA Statement: .....	<b>Error! Bookmark not defined.</b>
Math/Science Division Information: .....	4

