Midland College Syllabus
2022 - 2023
MATH 1325
Calculus for Business & Social Sciences
3 Semester Credit Hours
(3 Lecture/0 Lab)

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:

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 <u>Mathematics with Applications</u>, 12th ed., Pearson.
- MyMathLab Access Code only
    - ISBN: 978-0-135-90428-2 (18 weeks)
    - ISBN: 978-0-13476762-8 (24 weeks)
- Scientific Calculator
- MyMathLab Access Code may be required by some instructors.

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 assessments outlined in the syllabus and Instructor Handout.

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

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:

At least 70% of the course grade will come from proctored assignments. Students will be evaluated based on grades which may including the following but are not limited to:

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

Students will be evaluated based on the results of examinations given throughout the semester. 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).

Course Schedule:
This class meets for 3 contact hours per week. For a tentative 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 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 Integral 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
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.

Continuity of Instruction Statement
In the event that on campus activities are suspended due to extenuating circumstances, such as weather or quarantine, the instructor will continue instruction in a manner that best supports the course content and student engagement. In this event, your instructor will notify students of the change via Click here to enter text. At that time, they will provide details about how instruction and communication will continue, how academic integrity will be ensured, and what students may expect during the time that on campus activities are suspended. If a student becomes unable to continue class participation due to extenuating circumstances, (e.g., health and safety, loss of power, etc.) the student should contact their instructor and advisor for guidance. Resources are available to students via the SOS program. Information can be found at https://www.midland.edu/services-resources/student-services/sos.php.

Grievances or complaints
Concerns should be expressed as soon as possible to allow for early resolution. Midland College encourages students to discuss their concerns with their instructor first. If you feel uncomfortable discussing your situation with your instructor, students should discuss their concerns with the Chair of the appropriate department (Biology Chair – Mr. Tomas Hernandez (432-685-6751), Chemistry Chair – Mr. John Anderson (432-685-6737), Engineering and Physics Chair – Dr. Brian Flowers (432-685-4586), Geology Chair – Mr. Antony Giles (432-685-5580), Kinesiology Chair – Ms. Sheena Thompson (432-685-4579), Math Chair – Dr. Krista Cohlmia (432-685-4541) then the Dean of Math and Science – Dr. Miranda Poage (432-685-4561). If a resolution is still not possible, students may proceed with the formal complaint process.
http://catalog.midland.edu/content.php?catoid=14&navoid=2579#grievances-and-complaints

Math & Science Division Information:
Division Office: AHSF 124   (432) 685-4561
Division E-Mail: mns@midland.edu

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

Contents