McLennan

C O M M U N I T Y

C O L L E G E

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

Calculus for Business & Social Sciences

MATH 1325.01

Peter Blaskiewicz

NOTE: This is a 6-week (Summer I session) course.

NOTE: This is an online course, with class meetings using Zoom.

Course Description:

MATH 1325 Calculus for Business & Social Sciences Presents 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. Topics include optimization of functions, curve sketching, definite and indefinite integrals, differential equations, partial derivatives, and Lagrange multipliers.

Prerequisite:

Math 1324 (Mathematics for Business & Social Sciences) or Math 1314 (College Algebra) with a minimum grade of C, or pass college algebra placement test, or consent of division director.

Course Notes and Instructor Recommendations:

Success in this course requires a prior working knowledge of basic algebra concepts, obtained in the prerequisite courses. These basic skills are not retaught in this class, but they are applied to business-specific problems and processes. If it has been more than three years since the prereqs were completed, or if the student knows that his/her basic algebra skills are weak, he/she is strongly encouraged to remediate beginning with MATH 0311 or possibly 0307.

MyMathLab (*MML*) will be used extensively for posting course notes, assignments, grades, testing, and other communications. Students are expected to check their *MML* and MCC email accounts often.

Note about this summer version of the class:
I will be holding class sessions in Zoom each morning, MTWTh, from 8:00 till 10:00 a.m. The URL will be posted in this course's Brightspace shell. I strongly encourage you to attend and be an interactive class, for several reasons. For one thing, it will help make the material more immediate and relevant, and you can get your questions resolved right away if you are there 'as it happens.' Also, I will be able to tailor the lessons to your level of understanding if I have an audience to 'read.'
A few of you have let me know that you have to work at that time. The Zoom sessions will be recorded, and links to each video will be posted in Brightspace soon after the class meeting is over (hopefully within 15 minutes or so, but in any case by mid-afternoon). If you miss a class meeting, it is expected that you will watch the video later that day and try your hand at the homework assignment, so that you are ready for the next lesson and don't get behind. (The material does build on itself.)
I will be available for individual Zoom chat sessions / 'office hour' by arrangement, especially if you cannot come to one of the regular class sessions. I request that you first watch the video over the missed class, so that we are not reinventing the wheel. The best way to arrange a Zoom meeting is by emailing me with a suggestion of a time or two that would work for you; if you call me, a voice message would go to my email box anyway. If you are someone whose work schedule seldom or never allows you to attend the Zoom classes, I will expect you to meet with me occasionally in Zoom at other times so that I can know who my students are.

Instructor Information:

Instructor Name:	Peter Blaskiewicz
MCC E-mail:	pblaskiewicz@mclennan.edu
Office Phone Number:	254.299.8869
Office Location:	MATH 213
Office/Teacher Conference Hours:	MTWTh 1:30 – 2:30 p.m.
	Other times by arrangement via email
Zoom Office Meeting ID:	254 299 8869 (https://mclennan.zoom.us/j/2542998869)

Required Text & Materials:

Title:	**_Finite Mathematics and Calculus with Applications_** (MyMathLab access required; text is optional. MML Course ID will be announced in Brightspace.
Author:	Lial, Greenwell, and Ritchey
Edition:	10th ed.
Publisher:	Pearson/Addison Wesley
ISBN:	978-0-321-97940-7 (for optional printed hardback)

A TI-83 or TI-84 graphing calculator is also required.

MCC Bookstore Website: http://www.mclennan.edu/bookstore/

Student Support/Resources:
MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at http://www.mclennan.edu/campus-resource-guide/

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8:00 a.m.-5:00 p.m. to meet with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) is open 12:00 p.m.-1:00 p.m., Monday-Friday, without an appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

Minimum Technical Skills:
Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:
In the event MCC's technology systems are down, you will be contacted/notified through your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

* **[Click Here for the Minimum System Requirements to Utilize MCC's D2L|Brightspace](https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html)**
(https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html)
Click on the link above for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Methods of Teaching and Learning:

Lecture online using Zoom with student participation in example problems; lecture preparation available through LiveScribe pdf documents posted in MyMathLab; homework submitted online through MyMathLab; tests and a final exam in MyMath:Lab. Measurements of success include the following criteria:

- Communications: Students participate in assignments involving topics related to Mathematics of Business and Economics. They then share their results with their instructor and/or colleagues in class via written, oral, and visual methods.
- Critical Thinking: Critical thinking is the essence of all mathematical studies. Through inductive and deductive reasoning, students explore problems using the logical process of inquiry, analysis, evaluation, and synthesis.
- Empirical and Quantitative Skills: Students work on various mathematical problem solving skills throughout the course. The course focuses on the manipulation and analysis of numerical data or observable facts as presented in application problems and /or problem skill sets in which students demonstrate their ability to reach informed conclusions using mathematical processes.

Course Objectives and/or Competencies:

Upon successful completion of Math 1325, the student will be able to:

- recall the limit definition of derivative and use it to derive simple functions.
- recall and use the polynomial, product, quotient, chain, exponential, logarithmic, and implicit rules/techniques for calculating derivatives.
- use derivatives to write equations of tangent lines, calculate rates of change, optimize functions, evaluate marginal functions, and to analyze functions and their graphs for increase/decrease, relative and absolute extrema, concavity, and inflection.
- solve a variety of business and economics applications involving optimization, extrema, and concavity, with and without a graphing calculator.
- calculate antiderivatives, definite integrals, and improper integrals.
- apply antiderivatives to solve elementary differential equations.
- apply definite integrals to calculate areas under and between curves, volumes of solids of revolution, and average value of functions, using a graphing calculator when appropriate.
- calculate first- and second-order partial derivatives of functions in several variables.
- test functions in two variables for relative maxima/minima and saddle points.
- apply Lagrange multipliers to optimize two-variable functions with constraints.
- evaluate double integrals and use them to calculate volumes beneath surfaces and over rectangular regions.

Course Outline or Schedule:

The schedule is subject to change. Should a change become necessary, students will be notified about changes verbally, during class. In the event unforeseen circumstances prevent a class from occurring as scheduled, either make-up lecture material will be posted in Brightspace or the calendar schedule will be adjusted and announced. If something on the school's end or the publisher's end prevents a test from taking place as scheduled, the test window will be moved forward to the next available day.

Date	**Topics**
Monday, June 1	Introduction; 11.1 – 11.4 briefly
Tuesday, June 2	12.1; 12.2; 12.3
Wednesday, June 3	12.4; 12.5
Thursday, June 4	13.1; 13.2
Monday, June 8	Ch 12 Test
Tuesday, June 9	13.3; 13.4
Wednesday, June 10	14.1; 14.2
Thursday, June 11	Ch 13 Test
Monday, June 15	14.3; 14.4
Tuesday, June 16	Ch 14 Test
Wednesday, June 17	15.1; 15.2
Thursday, June 18	15.4; 15.5
Monday, June 22	16.2; 16.4
Tuesday, June 23	16.5
Wednesday, June 24	Ch 15 & 16 Test
Thursday, June 25	17.1; 17.2
Monday, June 29	17.3; 17.4
Tuesday, June 30	17.6
Wednesday, July 1	Catch-up / Review
Thursday, July 2	Review as needed
Monday, July 6	Final Exam

Course Grading Information:

Your course grade will be based on homework, chapter tests, and a final exam. All will be submitted online in MyMathLab. The relative weights of each of these factors are as follows:

Homework (online using MyMathLab)	20%
Chapter Tests (a projected total of 5; subject to change)	60%
Final Exam	20%

Work the online homework in MyMathLab. Homework over a section will be due at the time of the test over that section; late homework will be penalized 5% per day of the credit on the problems submitted late. (The penalty will not be applied to any problems in a set that are submitted on time, but only to problems in the set that are submitted late.) As students who have

successfully completed other mathematics courses in the past, you should know the value and necessity of practicing these exercises outside of class time. Note: If the usual access to MyMathLab at http://www.mymathlab.com/ is down for any reason, try using this alternate URL to get directly to the homework: https://www.mathxl.com/login_mml.htm (No other functionality except homework access is available here, but at least you'll meet homework deadlines.)

The chapter tests will be in MyMathLab. They will have a time limit, and they must be completed within a specified window (a day or a couple of days). The tests will all be weighted equally, with all the test weights equal to 60% of the course grade.

NOTE: In order **to take a test** (or the final), each of the **homework** sets covered on the test **must be completed with** a grade of **at least 80**%. Otherwise MyMathLab will not allow you to open the test. Deadlines for tests will not be extended for those who can't access the test due to unfinished homework.

The final exam is scheduled for Monday, July 6. The final will be cumulative. The grade on the final exam may also be used to replace your lowest chapter/unit test grade, if it is to your advantage.

Your course grade at any time may be found in MyMathLab, which will keep a running average of all your tests and the homework sections that you have attempted. Caution: since it is possible to work homework after the due date (for a penalty), the homework grade in MyMathLab will not include 0's for homework not yet attempted, until the very end of the course. If a student has past-due homework sets, the homework and course average will appear higher than they really will be if the work is not done by the semester's end.

The letter grade in the course will be based on the customary 90-80-70-60 scale.

Late Work, Attendance, and Make Up Work Policies:

Homework over a unit (chapter or group of chapters) is due the day of the test over those chapters. Since one of the primary purposes of the homework is to prepare you for the test, late homework will be penalized 5% per day of the credit on the problems submitted late. (The penalty will not be applied to any problems in a set that are submitted on time, but only to problems in the set that are submitted late.)

Your attendance will be base on your activity in MyMathLab and participation in Zoom class sessions or 'office meetings' with the instructor. If seven consecutive days elapse with no activity from a student, that student will be dropped from the course for non-attendance. If there is sporadic activity in MyMathLab, and the student falls more than a week behind in assignments, that will also be taken as an indication that the student does not intend to pursue the course to completion, and the student will be dropped for non-attendance. If a situation arises that requires you to be inactive for more than just a day or two, please contact the instructor and discuss the situation, so that you are not otherwise dropped for non-attendance.

If you miss taking one chapter test during its announced window, the grade on the final exam can count to replace that missing test grade. (It will also count as the final.) If you have missed more than one test, only one of those missing grades can be replaced by the final. If you miss the final, the course grade will be calculated with a 0 in its place. (Please do not miss the final!)

MCC Academic Integrity Statement:

The Center for Academic Integrity defines academic integrity as "a commitment, even in the face of adversity, to five fundamental values: honesty, trust, fairness, respect, and responsibility. From these values flow principles of behavior that enable academic communities to translate ideals into action." Individual faculty members determine their class policies and behavioral expectations for students. Students who commit violations of academic integrity should expect serious consequences. For further information about student responsibilities and rights, please consult the McLennan website and your Highlander Student Guide.

For more information, see https://www.mclennan.edu/academic-integrity

Academic Integrity Statement addendum:

Collaboration on out-of-class assignments is encouraged, but at no time should work belonging to one student be in the possession of another student. Likewise, students are not to engage in cheating in any form during or in preparation for tests or the final exam. All students involved in a cheating incident, whether in providing or receiving assistance, will receive grades of 0 for that assignment, be reported to Student Development, and find their names placed in the MCC database for cheating incidents. If there is a second incident, all students involved will be dropped from the course with grades of F and listed as repeat offenders in the database.

MCC Attendance Policy:

Regular and punctual attendance is expected of all students, and each instructor will maintain a complete record of attendance for the entire length of each course, including online and hybrid courses. Students will be counted absent from class meetings missed, beginning with the first official day of classes. Students, whether present or absent, are responsible for all material presented or assigned for a course and will be held accountable for such materials in the determination of course grades.

Please **click here for the MCC Attendance/Absences Policy (https://www.mclennan.edu/highlander-guide/policies.html)** for the complete policy.

Student Behavioral Expectations:

Students are expected to be courteous and respectful of their classmates and of instructors at all times. This includes, but is not limited to, the following:
  - Familiarize yourself with Zoom's features
  - Please do participate in the class meetings. It's fine to have your mic on and ready for interaction, but mute yourself if the dog or children or other background noise would disrupt us.

- Please use your webcam if you have one. Let me, as well as your fellow classmates, know who is in this course with us. But be mindful of your surroundings when your webcam is on. If necessary or desirable, use a non-distracting virtual background; Zoom provides that option.
- Dress appropriately for class.
- Once the lecture gets going, stick to the topic at hand, just as you would for a face-to-face lecture class. Avoid doing other tasks, checking email, being on the phone, or the like.
- Do not use coarse or foul or offensive language, nor offensive or questionable imagery. Violation of this would be grounds for disciplinary action, including (but not limited to) being dropped from the course.
- Remember that the session is being recorded.

Accommodations/ADA Statement

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. Instructors should not provide accommodations unless approved by the Accommodations Coordinator. For additional information, please visit mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:
disabilities@mclennan.edu
254-299-8122
Room 319, Student Services Center

* **Click Here for more information about Title IX**
(www.mclennan.edu/titleix)
We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinators at titleix@mclennan.edu or to call Dr. Drew Canham (Vice President for Student Success) at 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC by calling 299-8210. The MCC Student Counseling Center is a confidential resource for students.

McLennan's Title IX webpage (http://www.mclennan.edu/titleix/) contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence