

South Plains College
Common Course Syllabus: MATH 1325 Business Calculus
Spring 2023

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1325 **Section:** 002

Course Title: Calculus for Business and Social Sciences

Available Formats: conventional, hybrid, and internet. This section primarily meets face-to-face, but also utilizes the internet.

Campuses: Levelland, Reese, and Dual Credit. This section meets face-to-face on the Levelland campus each week on Tuesdays and Thursdays from 12:30-2:15pm in room 124 of the Mathematics-Engineering building.

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 2313 or 2413, Calculus I.

Prerequisite: Successful completion with a grade of 'C' or better in MATH 1324 or MATH 1314.

Credit: 3 **Lecture:** 3 **Lab:** 0

Instructor: Jennifer Bartlett

Telephone: (806) 716-2664

Office: Levelland Campus, Math and Engineering building, office 113

Email: The instructor may be emailed through Blackboard or at jkbartlett@southplainscollege.edu.

Email Policy: All students at South Plains College are assigned a standardized SPC e-mail account. Although personal email addresses will continue to be collected, the assigned SPC e-mail account will be used as the official channel of communication for South Plains College. The Student Correspondence Policy can be found at www.southplainscollege.edu. To access the SPC student e-mail account, log in to portal.office.com. (Copied from SPC Student Guide) Since all students have an assigned SPC email, the instructor will only acknowledge, respond, and send emails to your assigned SPC email. This ensures all correspondence from the instructor is received by the intended recipient.

Virtual/Face-to-Face Office Hours:

- Mondays: 8:30-9:30am
- Tuesdays: 2:15-3:15pm
- Wednesdays: 8:00-11:00am, 2:15-3:15pm
- Fridays (virtual only): 8:30-10:30am
- And by appointment, as needed. (The appointments can be scheduled in Blackboard.)
- Virtual office hours also may be scheduled in Blackboard.

Textbook: A textbook is not required for this course; however, a recommended textbook for this course may be:
Mathematics with Applications in the Management, Natural, and Social Sciences, Lial, Hungerford, Holcomb, and Mullins, 2019, 12th Edition, Prentice Hall/Pearson Education

Supplies:

- Calculator: You should bring your calculator to every class meeting. You may use a graphing calculator on most homework, quizzes, and exams. TI-83, TI-83+, TI-84+ are preferred, but many others are also acceptable. Cell phones and similar devices may NOT be used as calculators and no sharing of calculators is allowed. If you have any questions about your calculator check with the instructor immediately.
- Paper, maybe a small amount of graph paper, pencils, and erasers
- Access to a reliable internet service, a way to print and scan documents, a device with the capability to participate in Zoom/Proctorio meetings with video and audio
- You may want 3-ring binder (about 2.5 or 3 inch) and dividers to keep track of all the course materials

Blackboard: Blackboard is the online course management system that will be utilized for this course. This course is supplemented online, so all access to course information and your instructor is through the Internet. This course syllabus, as well as all course materials can be accessed through Blackboard. Login at <https://southplainscollege.blackboard.com/>. The user name and password should be the same as the MySPC and SPC email.

User name: first initial, last name, and last 4 digits of the Student ID

Password: Original Campus Connect Pin No. (found on SPC acceptance letter)

Questions regarding Blackboard support may be emailed to blackboard@southplainscollege.edu or by telephone to 806-716-2180.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

Core Curriculum Objectives addressed:

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

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 Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors. Your final average in the course will determine the letter grade posted on your transcript. Grades will be updated on Blackboard during the semester. Your grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

- Daily Work (Assignments, Quizzes, Labs, etc.) = 16%
- Unit Exams (4 total) = 64% (16% for each exam)
- Final Exam = 20%

Assignment Format and Policy: Assignments are given after each lesson and are collected according to the tentative course schedule below. Expect a quiz to accompany each assignment. For each question on each assignment:

- Work on your own paper, not the assignment sheet that is given.
- Write the question number.
- In solving the problem, show all necessary work.
- Clearly mark your answer.
- Check your answers in Blackboard to make certain you are practicing the exercises correctly.
- Write your name at the top of each page of your work.
- Submit the assignment in Gradescope as a single pdf file, preferably using the Gradescope app. (Pdf files can also be generated easily using a scanner or many freely available phone apps, like CamScanner, Scannable, or OneDrive.)

Make certain to complete and submit assignments on time (or early). Early submissions are welcomed! Late assignments will not be accepted.

Quiz Format and Policy: Expect a face-to-face quiz to be administered at most every class session. No late quizzes will be accepted, as quizzes are to be taken during the class time.

Exam Format and Policy: There will be four-unit exams in this course. Exams must be taken at the days and times listed on the tentative course schedule. All exams must be taken in pencil. Students may not leave the examination room for any reason without turning in their exam for grading.

Final Exam: The comprehensive final will be given on Thursday, May 11th from 10:15am to 12:15pm. No make-up final will be given.

Make-up Exams: No make-up, or late, homework assignments will be given. No make-up quizzes and exams are given without prior notification AND proper documentation. If are absent from a quiz or exam, you must give prior notification and proper documentation of your absence. Students who do not take exams at the normal time, early or late, forfeit the right to attempt any extra credit on that quiz or exam.

To maximize your potential for successfully completing this course:

- login to Blackboard daily
- watch the lecture videos and take notes on them
- thoroughly complete and submit the assignments on time (or early)
- practice the exercises repeatedly until you have full mastery of them
- ask questions when you have them

Attendance/Student Engagement Policy: Attendance and engagement are the most critical activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments throughout the semester. The student is expected to attend at least eighty percent (80%) of the total class meetings and submit at least eighty percent (80%) of the total class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor may remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student cannot receive an X, the instructor will assign an F.

SPC Tutors (before 8pm)

Tutoring is FREE for all currently enrolled students. Make an appointment or drop-in for help at any SPC location or online! Visit the link below to learn more about how to book an appointment, view the tutoring schedule, and view tutoring locations.

<http://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php>

Tutor.com (after 8pm)

You also have 180 FREE minutes of tutoring with Tutor.com each week, and your hours reset every Monday morning. Log into Blackboard, click on the tools option from the left-hand menu bar. Click on the Tutor.com link and you will automatically be logged in for free tutoring. You may access tutor.com tutors during the following times:

Monday – Thursday: 8pm-8am
6pm Friday – 8am Monday morning

For questions regarding tutoring, please email tutoring@southplainscollege.edu or call 806-716-2538.

Academic Integrity (Plagiarism and Cheating Policy): “Complete honesty is required of the student in the presentation of any and all phases of course work. This idea applies to quizzes of whatever length as well to final examinations, to daily reports, and to term papers.” (*SPC General Catalog*)

Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain an unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in peer editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension. (*SPC General Catalog*)

Plagiarism and cheating are not tolerated in this course. Under the policies of South Plains College, punishment for cheating may include no credit (failing) on the assignment, quiz, exam, or the course.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

COVID Response: South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: [COVID Response \(southplainscollege.edu\)](https://southplainscollege.edu/COVID-Response).

Diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, Campus Concealed Carry: South Plains College policies concerning diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, and Campus Concealed Carry Statements can be found here: [Syllabus Statements \(southplainscollege.edu\)](https://southplainscollege.edu/Syllabus-Statements).

SPC Bookstore Price Match Guarantee Policy: If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by Amazon*, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

Math 1325.002 Tentative Calendar Spring 2023 Tuesday/Thursday

Date	Topics	Assignments <ul style="list-style-type: none"> • Assignments are due by <u>noon</u> of corresponding Fridays • Quizzes are due by the end of the class meeting
Week 1: Jan 17-20 (Mon, Jan 16 is a holiday)	Course Introduction 1.1: Functions Review 1.2: Limits (Table & Graphs)	1.1, 1.2
Week 2: Jan 23-27	1.3: More Limits (Algebra & Infinity) & Continuity 1.4: Rates of Change & Definition of the Derivative	1.3, 1.4
Week 3: Jan 30-Feb 3	1.5: Differentiation Rules	1.5
Week 4: Feb 6-10	1.6: Marginal Analysis Review for Unit 1 Exam	1.6
Week 5: Feb 13-17	Unit 1 Exam (Tues, Feb 14) 2.1: The Chain Rule	2.1
Week 6: Feb 20-24	2.2: Implicit Differentiation 2.3: Differentiation of Exponential & Logarithmic Functions	2.2, 2.3
Week 7: Feb 27-March 3	2.4: Related Rates 2.5: Elasticity of Demand	2.4, 2.5
Week 8: March 6-10	Unit 2 Exam (Tues, March 7) 3.1: Curve Sketching (part 1 of 2)	3.1
March 13-17	<i>No School: Spring Break</i>	
Week 9: March 20-24	3.2: Curve Sketching (part 2 of 2) 3.3: Optimization	3.2, 3.3
Week 10: March 27-31	3.4: Antiderivatives & Integration Review for Unit 3 Exam	3.4
Week 11: April 3-6 (Fri, April 7 is a holiday)	Unit 3 Exam (Tues, April 4) 4.1: Definite Integrals & The Fundamental Theorem of Calculus	4.1
Week 12: April 10-14	4.2: Integration by Substitution 4.3: Integration by Parts	4.2, 4.3
Week 13: April 17-21	4.4: Area Between Curves 4.5: Business Applications of Integration	4.4, 4.5
Week 14: April 24-28	Review for Unit 4 Exam Unit 4 Exam (Thurs, April 27) Last Day to Drop a Course (Thurs, April 27)	
Week 15: May 1-5	Review for Final Exam	
Week 16: May 8-11 (Commencement is Fri, May 12)	Final Exam (Thurs, May 11, 10:15-12:15)	