

South Plains College
Common Course Syllabus: MATH 1325
Revised December 2022

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1325

Course Title: Calculus for Business and Social Sciences

Available Formats: conventional, hybrid, and internet

Campuses: Levelland, Downtown Center, and Dual Credit

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

Textbook: *Mathematics with Applications in Business and Social Sciences*, Hawkes Learning, 2022, Hawkes Learning

Supplies: Please see the instructor's course information sheet for specific supplies.

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.

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 can not receive an X, the instructor will assign an F.

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.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect from the student and the instructor. Neither the instructor nor the student should be subject to others' rude, disruptive, intimidating, aggressive, or demeaning behavior. 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.

South Plains College policies concerning diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, and Campus Concealed Carry Statements can be found here: <https://www.southplainscollege.edu/syllabusstatements/>.

South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: <https://www.southplainscollege.edu/emergency/covid19-faq.php>.

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.

Assessment: Grading will be done according to the standard 10 percent scale (i.e. 100% - 90% is an A, etc.) with assignments weighted as follows:

Participation	25%
Tests	25% each
Final Exam	25%

Class Attendance: Attendance to in-person class meetings is required. In order to count towards completion, students must attend at least 80% of class meetings **and** turn in 80% of required course work. Failure to meet one or both of these standards may result in the student being dropped from the course with an X. If a student cannot be given an X, they will be given an F.

If you wish to drop the course on your own (which gives a mark of W) see the drop materials in the “Syllabus & Schedule” section of Blackboard. The last day to drop the course is Thursday, June 29 (6/29).

As this class is a “flipped” course environment, students are expected to arrive to class having

1. worked through the course materials (textbook, videos, etc.) and
2. attempted many of the problems.

The class time will be spent

1. answering student questions over the material
2. working problems from the homework
3. turning in assignments and quizzes.

Homework: Your access to Hawkes Learning includes lessons over each section in the textbook that we will be covering. Each lesson has three modules:

1. **Learn:** this module has the relevant parts of the textbook, and sometimes includes videos over the material or over examples being done.
2. **Practice:** in this module you can practice problems related to the material in the learn section. You may send questions to your professor, utilize tutorial features, and quickly access the textbook.
3. **Certify:** the certify module is where your assignment grades come from. The questions come in more of a quiz style, without access to the same tools as the Practice section. If you score above the mastery threshold (usually 79%) you will be awarded “Mastery” which gives full credit over that lesson.

Quizzes: Quizzes will be given at most class meetings (except exam days) as a way to gauge class understanding, and will be turned in at the end of class. Quizzes are not dropped and cannot be made up.

Exams: There are two midterm exams and one comprehensive final exam given during this course. These exams will be held exclusively during the classroom sessions of the course. Questions will partly consist of problems similar to the lessons from Hawkes and from assigned quizzes.

Students must show all work when taking exams. All work should be done neatly and in pencil.

The final exam is comprehensive, and a required part of the course. Failure to take the final exam results in an automatic F. The Final Exam will be held Friday, July 7 from 4 pm

Email and Communication: The email at the header of the syllabus is the best way to get into contact with me. This email is also available on Blackboard in the “Instructor Information” section of the Blackboard course. This should be used as often as necessary to ask questions, or turn in written assignments in the event that Blackboard or Gradescope are down. You may also email incomplete parts of assignments in order to get feedback on how to proceed.

All emails should be formatted with the course number and section, and an adequate heading (i.e. “Math 1324-151 project questions” or “Math 1324-151 Chapter 3 Case Study”). Failure to format the subject line properly may result in emails being caught by SPC’s email filter. Neither the instructor nor SPC is responsible for emails lost due to improper formatting.

Be sure to confirm that all relevant attachments are sent with the email and that the body of the email contains all relevant information for that correspondence.

Students that have questions while working problems on Hawkes may use the “Send to Instructor” button found at the bottom left of the work space. This sends the instructor an email with an attachment of the specific version of the problem being worked, and allows a space for the student to describe the issue they have encountered. Emails sent this way have already been marked as “safe” and will not be caught by email filters.

Students who wish to set an appointment for a meeting may use the MS Bookings link in the “Instructor Information” section of the blackboard course.

Showing Work: In all written assignments, submitted work of one kind or another needs to be shown in order for the instructor to properly assess how much of the content has been properly learned and implemented. *When submitting written work any question or component that does not have work associated with it will be given reduced (or no) credit.* The Course Resources area has further instructions and examples of properly showing work.

Civility in the classroom: Students are expected to assist in maintaining a classroom environment that is conducive to learning. Given that this is an online course, “the classroom” is defined as any set of interactions that students will have with one another (primarily discussion boards). Students who are found to be intentionally hurtful or disrespectful, or repeatedly detract from the focus of the discussion boards will have their grade in this category penalized (up to zero credit for a discussion assignment), and may be administratively dropped from the course (with an X or F) for creating a hostile learning environment.

It is important to note the role that students play in their own mathematical education. Just as everybody has had (and continues to have) different life experiences, we all have different mathematical experiences as well. And while it is important that the systems and institutions that people interact with (of which this class is one) are impartial, to expect such from human beings borders on impossible. To that end, it is imperative that all students give space for their classmates to come into the material from where they are, and that we seek to understand each other. The most important capacity students can give each other is the space to be wrong, and to be guided out of misconceptions or errors. Both instructor and student are not just the product of their own hard work and thinking, but also of what their environments (both past and present) allowed them to work or think hard about.

Student Resources: To schedule a face-to-face or virtual meeting with SPC tutors, go to the SPC webpage, click Student Services, and click on Tutoring. There students may choose at which center they wish to have tutoring or if they wish to have a virtual session (face-to-face sessions only require an open spot, while virtual sessions require 4 hours notice). Click the Booking link and log in with SPC credentials. Students can then choose the subject and tutor.

Students also have access to the use of Tutor.com for a few hours each week. Students can access Tutor.com directly from the blackboard homepage, or from the Help section of this Blackboard course.

Date	Topics of Discussion	Lessons	Due Dates Lessons should be certified by 11 pm on the due date, quizzes are due at the end of class
Monday 6/5/2023	Limits and Continuity	10.1 - 10.4	
Tuesday 6/6/2023	Defintion of Derivative	10.7 - 10.9	Lessons 10.1 - 10.4, Quiz 1
Wednesday 6/7/2023	Product, Quotient and Chain Rules	11.1 - 11.2	Lessons 10.7 - 10.9, Quiz 2
Thursday 6/8/2023	Implicit Differentiation and Related Rates	11.3	Lessons 11.1 - 11.2, Quiz 3
Monday 6/12/2023	Curves part 1	11.4 - 11.6	Lesson 11.3, Quiz 4
Tuesday 6/13/2023	Curves part 2	12.1 - 12.4	Lessons 11.4 -11.6, 12.1 - 12.4
Wednesday 6/14/2023	Exam 1 The exam will begin at 6 pm and end at 7:55 pm		
Thursday 6/15/2023	Optimization	12.5 - 12.6	
Monday 6/19/2023	Exponential and Logarithmic Functions	13.1 - 13.2	Lessons 12.5 & 12.6, Quiz 5
Tuesday 6/20/2023	Applications	13.4, 13.6	Lessons 13.2 & 13.2, Quiz 6
Wednesday 6/21/2023	Antiderivatives	14.1 - 14.2	Lessons 13.4 & 13.6, Quiz 7
Thursday 6/22/2023	Definite Integrals and the Fundamental Theorem of Calculus	14.3 - 14.4	Lessons 14.1 - 14.4
Monday 6/26/2023	Exam 2 The exam will begin at 6 pm and end at 7:55 pm		
Tuesday 6/27/2023	Applications of the Integral	14.5 - 14.6	
Wednesday 6/28/2023	Integration by Parts	15.1	Lessons 14.5 & 14.6, Quiz 8
Thursday 6/29/2023	Annuities and Income Streams	15.2	Lesson 15.1, Quiz 9
Monday 7/3/2023	Multivariable Functions and Partial Derivatives	16.1 - 16.2	Lesson 15.2, Quiz 10
Tuesday 7/4/2023	INDEPENDENCE DAY		
Wednesday 7/5/2023	Local Extrema and LaGrange Multipliers	16.3 - 16.4	Lessons 16.1 - 16.4, Quiz 11
Thursday 7/6/2023	Review for Final		
Friday 7/7/2023	Final Exam The final may be started as early as 4 pm. Exams will not be distributed after 7 pm, and all final exams will be collected at 7:55 pm.		