

South Plains College
Common Course Syllabus: MATH 2413
Revised December 2022

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 2413

Course Title: Calculus I

Available Formats: conventional, hybrid, and internet

Campuses: Levelland, Downtown Center, and Dual Credit

Course Description: Limits and continuity, the Fundamental Theorem of Calculus, definition of the derivative of a function and techniques of differentiation, applications of the derivative to maximizing or minimizing a function, the chain rule, mean value theorem, and rate of change problems, curve sketching, definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas.

Prerequisite: Successful completion with a grade of 'C' or better in MATH 2412 or successful completion with a grade of 'C' or better in MATH 1314 and MATH 1316.

Credit: 4 **Lecture:** 3 **Lab:** 2

Textbook: *Calculus, Volume 1*, Strang and Herman, OpenStax

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. Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals.
2. Draw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point.
3. Determine whether a function is continuous and/or differentiable at a point using limits.

4. Use differentiation rules to differentiate algebraic and transcendental functions.
5. Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems.
6. Evaluate definite integrals using the Fundamental Theorem of Calculus.
7. Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus.

Student Learning Outcomes Assessment: 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 cannot receive an X, the instructor will assign an F.

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.

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.*

South Plains College
Math 2413 – Calculus I (4:3:1)
Course Syllabus
Spring 2023

Instructor: Diane Eagle
Office: B015, Lubbock Downtown Center (basement)
Phone: 806-716-2736
E-mail: deagle@southplainscollege.edu

Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday
10:15 – 11:00 2:15 – 3:00	2:15 – 3:00	1:00 – 3:00	2:15 – 3:00	9:00 – 12:00

Course format: This is a hybrid class utilizing a flipped classroom model. Course materials will be posted online and must be reviewed PRIOR to attending class. Students will attend one class meeting per week (half that of a non-hybrid class.) Classroom time is reserved for face-to-face discussion of homework problems and completion of in-class assignments and/or quizzes. This course may be moved online at a future date, in response to COVID-19 safety requirements.

Supplies: Pencils, paper, straightedge, graph paper, and a large 3-ring binder. **Only a basic non-graphing calculator will be allowed in class.** Graphing calculators and calculators on cell phones or other electronic devices or apps will **NOT** be allowed during tests or in-class assignments. The required textbook is available for free download online; you may also purchase a print version. Go to: www.openstax.org/details/calculus-volume-1. Suitable face coverings are optional, but not required. (Refer to the link posted above regarding SPC's COVID-19 protocols.)

Technology requirements: Students need to have reliable access to the Internet and email. Ability to view lecture videos and open and/or print documents is required.

Email: Your SPC email account will be used for all correspondence and notifications. When emailing me, be sure to include your name and course section. Do NOT use the “course messages” link in Blackboard as I rarely check it. Provide problem/page numbers or a screen shot if applicable.

Course Evaluation: Your final grade will be determined by the average of three tests (300 points or 75%) and the comprehensive final exam (100 points or 25%.) A total of 400 points is possible. The number of points earned will follow the grading scale below:

Grading Scale:	A	90 to 100	358 to 400 points
	B	80 to 89	318 to 357 points
	C	70 to 79	278 to 317 points
	D	60 to 69	238 to 277 points
	F	Below 60	0 to 237 points

Exams: Dates for the 3 major tests and comprehensive final exam are listed on the calendar. Exams will be conducted face-to-face, provided this course does not move fully online. If you miss one of the 3 major tests, your score on the final exam will replace the missing grade. A second missed test will be averaged as a zero. If no tests were missed, the final exam grade (if higher) will replace the lowest major exam grade; however, if the final exam is lower than any of the 3 major exam grades, then it will only count once in the course average.

Homework and class assignments: Homework is assigned from each section covered, and time will be available during class to ask questions. Consistently working problems reinforces the skills and concepts presented, and is essential for success in this course. Demonstrate relevant steps and complete work for each problem; do not submit “answer sheets.” Completed homework and lab assignments will be self-assessed by the student during class. All class notes, homework, assignments, and exams are to be organized in the student’s 3-ring binder. This binder will be evaluated at the end of the semester for extra credit.

Bonus Points: Students will have the opportunity to make corrections on **one** test (final exam not included) of their choosing, for up to 50% of the points missed. Corrections are due the following class period after the test is graded. Test corrections must have complete and correct solutions and be turned in on a separate sheet of paper with the exam.

Additional Resources: Blackboard is the online management system used for this course. In addition to the grade book, all course materials, including the syllabus, calendar, lecture videos, handouts, test reviews, and additional resources can be accessed through Blackboard. Handouts accompanying the lecture videos are available to download and complete while viewing the lecture videos. **Be sure to check Blackboard and your SPC email account regularly for class announcements and updates.**

Tutoring: Tutoring services are available to students at no charge. Links to access online tutoring and instructions for booking face-to-face appointments with SPC tutors will be posted on Blackboard.

Attendance Policy: Refer to page 2 above. Students who arrive to class late, leave early, sleep during class, or habitually access their cell phones during class, may be counted absent. Whenever absences become excessive and, in the instructor’s opinion, minimum course objectives cannot be met due to absences, the student may be withdrawn from the course. Students wishing to drop this class must see the registrar by Thursday, April 27, 2023 to officially withdraw and receive a grade of W.

Classroom Civility: Students are expected to be respectful of their fellow classmates and maintain a classroom environment that is conducive to learning. Please model safe behaviors to protect the health of yourself and others. Silence cell phones and other electronic devices **before** entering the classroom. While usage of cell phones for class-related activities, such as viewing lessons or scanning and uploading completed assignments IS permissible, **usage unrelated to class will NOT be tolerated.** You will receive ONE verbal warning, after which you will be asked to leave and receive a zero for that day’s assignment. Refrain from using offensive language, talking loudly or off-topic, working on outside assignments, chewing tobacco products, or otherwise being disruptive in class. Food and/or drinks are NOT allowed in the classroom.

Academic Honesty: Students are expected to uphold the ideas of academic honesty. Refer to page 2 for explanations of what constitutes academic dishonesty and plagiarism. **Use of a graphing calculator, cell phone, or other electronic devices or apps during an in-class assignment or exam will result in a grade of zero.** Leaving the classroom during an exam or quiz **will not** be permitted. Students who do not follow the academic honesty policy will receive a grade of zero for the assignment, and may be dropped from the course with an F, or face possible suspension from the college.

Calendar: The following schedule outlines each week's topics and test dates. Course materials and assignments will be posted online for each section and are to be reviewed/attempted **PRIOR** to attending class. This schedule is tentative and subject to revision. Any changes will be announced in class as well as updated via Blackboard.

MATH2413.601– SPRING 2023

Week	Date	Topics covered	Activity
1	Jan. 18	Syllabus, Chapter 1 – prerequisite skills	
2	Jan. 25	Review sections 2.2, 2.3, 2.4	Lab 1
3	Feb. 1	Review sections 3.1, 3.3	Lab 2
4	Feb. 8	Review sections 3.4, 3.5, 3.6	Lab 3
5	Feb. 15	TEST 1	
6	Feb. 22	Review sections 3.7, 3.8	Lab 4
7	Mar. 1	Review sections 3.9, 4.1	Lab 5
8	Mar. 8	Review sections 4.5, 4.6	Lab 6
Spring Break March 13 – 17			
9	Mar. 22	TEST 2	
10	Mar. 29	Review sections 4.7, 4.10	Lab 7
11	Apr. 5	Review sections 5.1, 5.2, 5.3, 5.5	Lab 8
12	Apr. 12	Review sections 5.6, 6.1	Lab 9
13	Apr. 19	TEST 3	
14	Apr. 26	Review sections 6.2, 6.3	Lab 10
15	May 3	Review sections 6.4, 6.6	Lab 11
16	May 8 (Monday)	FINAL EXAM 5:00 pm – 7:00 pm	

*****Last day to drop is Thursday, April 27, 2023*****