

South Plains College
Math 2413 – Calculus I (4:3:2)
Course Syllabus
Fall 2016

Instructor: Diane Eagle
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Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday
1:00 – 2:30	9:30 – 10:00 2:15 – 2:45	1:00 – 2:30	9:30 – 10:00 2:15 – 2:45	9:00 – 12:00

Prerequisites: MATH 1314 and MATH 1316 (or concurrent enrollment in MATH 1316) or MATH 2412

Textbook: Larson, Ron, and Edwards, Bruce H. (2014). Calculus 10th edition. Brooks/Cole Cengage Learning. ISBN 978-1-285-05709-5. **This textbook is available on reserve in the library.**

Supplies: Pencils, paper, 3-ring binder with dividers, straightedge, and graph paper. **Only a basic non-graphing calculator (such as a TI-30) will be allowed in class.** Calculators on cell phones, graphing calculators, or other electronic devices will **NOT** be allowed during tests or in-class assignments. Arrive prepared to take notes every day.

Course Description: The purpose of this course is to provide a rigorous introductory study of differential and integral calculus for transfer into programs requiring a foundation of calculus. Topics include functions, limits, continuity, differentiation of algebraic functions, applications of the derivative, differentials, indefinite integrals, definite integrals, and applications of definite integrals.

Student Learning Outcomes/Competencies:

Upon successful completion of this course students will:

1. Develop solutions for tangent and area problems using the concepts of limits, derivatives, and integrals. (2.1, 4.3, 7.1)
2. Draw graphs of algebraic and transcendental functions considering limits, continuity, and differentiability at a point. (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 5.1, 5.4)
3. Determine whether a function is continuous and/or differentiable at a point using limits. (1.2, 1.3, 1.4, 1.5)
4. Use differentiation rules to differentiate algebraic and transcendental functions. (2.2, 2.3, 2.4, 2.5, 5.1, 5.4)
5. Identify appropriate calculus concepts and techniques to provide mathematical models of real-world situations and determine solutions to applied problems. (2.6, 3.7, 7.2, 7.3, 7.4, 7.5, 7.6)
6. Evaluate definite integrals using the Fundamental Theorem of Calculus. (4.4, 4.5)
7. Articulate the relationship between derivatives and integrals using the Fundamental Theorem of Calculus. (4.4)

Core Objectives:

Communication Skills:

- Develop, interpret, and express ideas through written communication
- Develop, interpret, and express ideas through oral communication
- Develop, interpret, and express ideas through visual communication

Critical Thinking:

- Generate and communicate ideas by combining, changing, and reapplying existing information
- Gather and assess information relevant to a question
- Analyze, evaluate, and synthesize information

Empirical and Quantitative Competency Skills:

- Manipulate and analyze numerical data and arrive at an informed conclusion
- Manipulate and analyze observable facts and arrive at an informed conclusion

Course Requirements: To maximize the potential to complete this course, a student should attend all class and laboratory meetings, take notes and participate in class, complete all homework assignments and examinations including final examinations.

Course Evaluation: Your final grade will be determined by the average of 4 major tests (400 points) the comprehensive final exam (100 points) and daily lab grades (100 points.) A total of 600 points are possible. The number of points earned will follow the grading scale below:

Grading Scale:	A	90 to 100	537 to 600 points
	B	80 to 89	477 to 536 points
	C	70 to 79	417 to 476 points
	D	60 to 69	357 to 416 points
	F	Below 60	0 to 356 points

Exams: Dates for the 4 major tests and comprehensive final exam are listed on the calendar. **There are NO makeup tests!** If you miss one of the 4 major tests, your final exam will count twice to replace the missing grade. A second missed test will be averaged as a zero. The final exam grade (if higher) will also replace the lowest major exam grade; however, if the final exam is lower than any of the 4 major exam grades, then it will only count once in the course average.

Daily Lab Grades: Each class period, students will be given a lab assignment to be completed and handed in at the end of class. These assignments are open-book and students are encouraged to work together. In the event of an absence, you must email your assignment to me on or before the day it is due. **Absolutely NO late assignments will be accepted.** Daily grades comprise 100 points, or approximately 17%, of your overall average.

Homework: If you only complete the lab assignments, you will not master the material nor be sufficiently prepared for exams; therefore, additional homework problems from each section are listed on the calendar. Consistently working problems reinforces the skills and concepts presented, and is essential for success in this course. In addition, many test questions come directly from the assigned problems and examples worked in class. Step-by-step solutions to odd-numbered problems from the textbook are available at <http://www.calcchat.com/>.

Tutoring: Students can obtain free tutoring in room M116 in the math building on the South Plains Campus in Levelland or in Building 2 at the Reese Center. Tutoring schedules will be posted on campus. Please remember to sign in when you seek the help of a tutor in each of these places.

Bonus Points: Students will have the opportunity to make corrections on **one** test (final exam not included) of their choice, for up to 50% of the points missed. Corrections are due the class period after the test is handed back and must be turned in on a separate sheet of paper with the exam. Occasionally, opportunities for extra points can be found on Blackboard, or tests may include a bonus problem.

Course Specific Instructions: Videotapes of many topics are available in room M116 in the math building at the Levelland campus. These tapes can be viewed in the lab, or checked out and taken home for viewing. A link is provided on Blackboard for online viewing. Additional free tutorial videos are also available at the following sites: <http://patrickjmt.com/>, <http://www.mathtv.com/>, and <http://www.khanacademy.org/>.

Attendance Policy: Attendance will be taken every class period. Students who arrive late, leave early, sleep during class, or fail to sign the attendance sheet 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 will be withdrawn from the course. **Any student who misses 3 consecutive classes or exceeds 5 absences throughout the semester will be administratively dropped and receive a grade of X or F.** Students wishing to drop this class must see the registrar by Thursday, November 17, 2016 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. Turn off all cell phones and other electronic devices **before** entering the classroom. The instructor reserves the right to ask a student to leave if his/her cell phone is left on and disrupts the class. 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. Academic dishonesty includes, but is not limited to, cheating on tests, collaborating with another student during a test, copying another student's work, using materials not authorized, and plagiarism. **Use of a graphing calculator, cell phone, or other electronic device during any in-class assignment or exam will result in a grade of zero.** Leaving the classroom during an exam 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.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

PLEASE NOTE: Texas SB 11 (Campus Concealed Carry) does NOT go into effect for community colleges until August 1, 2017.

MATH 2413.001, 2413.200 – FALL 2016

Week	Monday	Wednesday
1	Aug. 29 1.2 p. 55 1–25 1.3 p. 67 5–73	Aug. 31 1.4 p. 79 1–53 1.5 p. 88 1–47
2	Sep. 5 LABOR DAY	Sep. 7 2.1 p. 103 1–31 2.2 p. 114 1–61, 97–100 all
3	Sep. 12 2.3 p. 125 1–53, 63–75, 91–105	Sep. 14 2.4 p. 136 7–33, 43–71
4	Sep. 19 2.5 p. 145 1–39, 45, 47, 53	Sep. 21 2.6 p. 153 1–33
5	Sep. 26 3.1 p. 167 1–27, 37, 39 3.2 p. 174 1–19, 37–45	Sep. 28 TEST 1
6	Oct. 3 3.3 p. 183 3–47, omit 31	Oct. 5 3.4 p. 192 1–29
7	Oct. 10 3.5 p. 202 13–37 3.6 p. 212 5–21	Oct. 12 3.7 p. 220 3–21, 29, 33–39
8	Oct. 17 4.1 p. 251 7–41, 51, 53, 57	Oct. 19 TEST 2
9	Oct. 24 4.3 p. 273 13–43 4.4 p. 288 5–43, 51–55, 75–91	Oct. 26 4.5 p. 301 5–41, 47–61
10	Oct. 31 5.1 p. 325 41–63 5.2 p. 334 1–21	Nov. 2 5.3 p. 343 23–45 5.4 p. 352 1–15, 33–51, 91–105
11	Nov. 7 7.1 p. 442 1–6 all, 15–29, 37	Nov. 9 TEST 3
12	Nov. 14 7.2 p. 453 1–25, 41–48 all	Nov. 16 7.3 p. 462 1–29, omit 13
13	Nov. 21 7.4 p. 473 3–9, 15, 37–45	Nov. 23 THANKSGIVING
14	Nov. 28 7.5 p. 483 1–21, 25, 27	Nov. 30 TEST 4
15	Dec. 5 7.6 p. 494 1–25	Dec. 7 REVIEW
16	Dec. 12 FINAL EXAM (section 001) 8:00 am to 10:00 am	Dec. 14 FINAL EXAM (section 200) 5:30 pm to 7:30 pm

All homework assignments are odd problems unless otherwise noted.

*****Last day to drop is Thursday, November 17, 2016 *****