Spring 2025 East Texas A & M University
Math 2413.02E – Calculus I

This is the syllabus for Math 2413-Calculus I, Section 02E for Spring 2025. Please read it carefully. You will be responsible for all information given in the syllabus, and for any modification to it that may be announced in classes.

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Class time and room: MTWRF: 10:00-10:50am, Bin 326.

Text & Course Material: Calculus, 9th Edition, by James Stewart. ISBN-13: 978-1337624183. The material covered during the session will be Sections 1.4-1.8, Chapters 2, 3, and 4, then 6.1, 6.2, 6.3, and 6.4 from chapter 6, and finally 7.1 from chapter 7. We may occasionally cover enrichment activities, not in the text.

Course Description: Topics include 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.

Instruction: Instruction will include lectures, discussions, demonstration and models, and some group work, based on time available.

Calculator & Supplies: A graphing calculator is needed for this course. A TI 83 calculator is recommended. Using of Mathematica (a computer algebra system available in computers in Math Lab located in 328 Binnon Hall) is helpful but not required for this course.

Attendance: Attendance will be checked. It is your benefit to attend the class and it will be your responsibility to sign the daily roll sheet.

Student Learning Outcomes

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. 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.

This course addresses the following core objectives

Core Objective 1: Critical Thinking

Students will be able to analyze, evaluate, or solve problems when given a set of circumstances, data, texts, or art.

Core Objective 2: Communication Skills

In written, oral, and/or visual communication, East Texas A&M University students will communicate in a manner appropriate to the audience and occasion, with an evident message and organizational structure.

Core Objective 3: Empirical and Quantitative Skills

Students will be able to interpret, test, and demonstrate principles revealed in empirical data and/or observable facts.

Assessment Methods

This course will use homework, tests, quizzes, projects, and exams to determine student grades and proficiency of the learning outcomes for the course.

Tests: There will be three midterm tests and a final exam for the course. The tentative schedules for the exams are:

Test 1: Feb. 7, Friday, 10:00am-10:50am.
Test 2: Mar. 6, Thursday, 10:00am-10:50am.
Test 3: Apr. 11, Friday, 10:00am-10:50am.
Final exam: The comprehensive final exam is scheduled on
May 5, Monday, 10:30am-12:30pm.

No makeup exam will be given unless you have verifiable evidence showing an acceptable reason to have to miss a test and, in that case, you must notify the instructor before the test or in the earliest possible time. If you miss one test for a justifiable and verifiable reason, the average of your other two test grades will be used as the grade for the test you missed. This provision will

only be applied to ONE exam, so you should make every effort to be present and well prepared for all exams.

Homework & Quizzes: Homework has been assigned in the last page of this syllabus. You are strongly recommended to work out homework assignments on a regular basis since **No one can learn mathematics without doing it**! The assigned homework problems will be collected to grade **every Friday (from the 2nd week)** in the class before the lecture begins. Some homework problems or their similar forms will be used as test questions. Pop quizzes are expected from time to time.

Course grades: The course grade consists of

Homework & Quizzes: 15%
Three tests: 60%
Final exam: 25%.

The letter grades will be assigned using the following scale:

A: 90-100% B: 80-89% C: 70-79% D: 60-69% F: 0-59%

Withdrawal Policy: Concerning the deadlines and consequences of withdrawals please check on
https://inside.tamuc.edu/admissions/registrar/academicCalendars/

Tutoring & Help: A better way to learn math is to keep progress and leave no gaps in one's study. So please get help as soon as you need it and do not wait until it is too late. You are welcome to come to me or go to Math Skills Center located in **Bin 328** where you can find free tutors for help. The tutoring hours of Math Skills Center for the current semester are:

MTWR 10am – 6pm, and F 10am – 2pm

Academic Integrity: I have a **NO TOLERENCE** policy for cheating and if you are caught cheating you will fail this course. Cheating in this course includes the following:

- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of others.
- Having notes/practice work available during quizzes or tests.
- Possession or access to test items before the test is given.
- Deception in getting an excused absence to obtain the undeserved opportunity to make-up work.
- Use of cell phones or text messaging technology during exams or quizzes. You may not use the calculator on your cell phones.
- Improper citations in written works, or using another person's ideas and words as your own without giving proper credit.

- **Any** method, no matter how well rationalized or accepted, which improves a person's grade by any means other than study and skillful performances on exams and/or other assignments.

Students found guilty of an act of academic dishonesty in this course will be subject to receiving an "F" in this course.

Classroom Behavior: "All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment" (See Student's Guidebook). A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

AI use policy: Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors 'guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

The information for students with disability: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: Office of Student Disability Resources and Services, Texas A&M University-Commerce, Gee Library, Room 132, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148, email: StudentDisabilityServices@tamuc.edu

Counseling & Help: The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational

programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit www.tamuc.edu/counsel

Campus Concealed Carry Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to (http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

Math 2413 Weekly Schedule & Homework due

	Sections to be covered	Homework Due
W1	Sections 1.4, 1.5	
W2	Sections 1.6, 1.7, 1.8	HW Due 1/24: Sections 1.5, 1.6, 1.7
W3	Sections 1.8, 2.1, 2.2	
W4	Sections 2.3, Review and Test 1.	HW Due 2/7: Sections 1.8, 2.1, 2.2, 2.3
W5	Sections 2.4, 2.5	
W6	Sections 2.6, 2.7, 2.8	HW Due 2/21: Sections 2.4, 2.5, 2.6, 2.7
W7	Sections 2.9, 3.1, 3.2,	
W8	Sections 3.3, Review and Test 2	HW Due 3/7: Sections 2.8, 2.9, 3.1, 3.2
W9	Sections 3.4, 3.5, 3.6	
W10	Sections 3.7, 3.8, 3.9	HW Due 3/28: Sections 3.3, 3.4, 3.5, 3.6
W11	Sections 4.1, 4.2, 4.3	
W12	Sections 4.4, 4.5, Review and Test 3	HW Due 4/11: Sections 3.7, 3.8, 3.9, 4.1
W13	Sections 6.1, 6.2	
W14	Sections 6.3, 6.4	HW Due 4/25: Sections 4.2, 4.3, 4.5, 6.1
W15	Section 7.1, Course Review	
W16	Final Exam	5/5, Monday 10:30am-12:30pm

Math 2413 Homework

Section1.5: 4, 7, 8, 27, 28.
Section1.6: 6, 13, 20, 23, 52.
Section 1.7: 1, 3, 17.
Section 1.8: 4, 6, 13, 21, 25.
Section 2.1: 5, 19, 29, 35, 43.
Section 2.2: 19, 22, 39, 42, 57.
Section 2.3: 4, 9, 29, 33, 61.
Section 2.4: 1, 3, 10, 31(a), 45, 48.
Section 2.5: 2, 7, 11, 24, 54.
Section 2.6: 4, 5, 9, 13, 25.
Section 2.7: 1 (a)-(g), 11.
Section 2.8: 3, 9, 22.
Section 2.9: 3, 5, 12, 15, 21.
Section 3.1: 6, 7, 32, 37, 52.
Section 3.2: 10, 15, 20, 25.
Section 3.3: 2, 5, 10, 15, 40.
Section 3.4: 4, 9, 12, 31, 49.
Section 3.5: 2, 9, 53.
Section 3.6: 3, 4, 9.
Section 3.7: 2, 7, 14, 17(a), 18.
Section 3.8: 6, 13, 22
Section 3.9: 3, 5, 13, 20, 44.
Section 4.1: 2, 14, 16, 20.
Section 4.2: 6, 9, 20, 29, 67.
Section 4.3: 9, 12, 21, 24, 37.
Section 4.4: 2, 5, 16, 25, 35.
Section 4.5: 3, 9, 12, 20, 49.
Section 6.1: 4, 6, 17, 24, 41.
Section 6.2: 9, 15, 32, 33, 52.
Section 6.3: 5, 8, 23, 43, 46.
Section 6.4: 4, 10, 21, 42, 75, 80.

To be continued