MATH 2413.WWE (CRN#22371) - CALCULUS I

COURSE SYLLABUS:

Office Hours: M, T, W, F 11:08-11:38, M 3:30-4:30
Office Phone: 903-839-5551
Office Fax: 903-886-5945
University Email Address: Shelby.Brooks@etamu.edu

Preferred Form of Communication: email
Communication Response Time: Student course-related questions or concerns through email are answered usually within 24 hours during weekdays (M-F).

Class Meeting Time: MTWRF 10:18am – 11:04am
Class Location: WHS Room 215
Office Location: WHS Room 25

COURSE INFORMATION

Materials

Textbook(s): 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: This course examines differential and integral calculus of functions of one variable, as follows. 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. Prerequisites: Two years of high school algebra and trigonometry or Math 2312 with a minimum grade of C.

The use of a graphing calculator having at least the capabilities of the TI-83 will be helpful throughout the course. TI-89 is highly recommended. A computer algebra system will be used for some problem exploration, enhanced conceptual understanding, and to engage students as active participants in the learning process.

Student Learning Outcomes

Core Objectives: This course addresses the core objectives of critical thinking, communication, and empirical and quantitative skills.

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.

Student Assessment Outcomes

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

1. *Critical Thinking:* Will be measured through one or more of the following: quizzes, projects, and/or exams
2. *Oral, Visual, and Written communication Skills:* Will be measured through one or more of the following: quizzes, projects, and/or exams
3. *Empirical and Quantitative Skills:* Will be measured through one or more of the following: quizzes, projects, and/or exams

COURSE REQUIREMENTS

Instructional Methods: Instruction will be delivered in class and on D2L through lectures, demonstration and models, videos, and some group work, based on time available.

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – Make-up exams are possible only if there is a documented emergency.

Final Exam - Comprehensive Final Exam. Date will be announced in class and will work around AP exams and other dual credit exams on campus.

Quizzes – In class quizzes will be given periodically to check for mastery outside of exams.

In-class Participation – Students are expected to participate in class discussions and activities.

Homework Assignments – Homework will be assigned daily. The homework is a must for success in this class. Students are expected to complete the assignments and ask questions when they encounter tasks they do not understand. It is critical that students practice the skills necessary prior to the exam to be successful on the exams. **Homework due dates will be**

clearly communicated in class and online. Please pay careful attention to due dates. Please do not wait until the due date to complete your homework to avoid emergency situations or run into technical difficulties.

Attendance: Attendance will be taken at the beginning of each class. Logging in to D2L and completing assignments and daily work will also be used to determine part of your attendance. Students need to actively participate in class and/or online to receive credit. **Attendance and participation (in person and/or online) are a must to be able to do well in this class.** It is expected that students follow the guidelines set forth by the Class Attendance Policy in the current Undergraduate Catalog.

Suggested Problems: There will be suggested problems assigned for each section. The answers to most of these problems are in the text, so I will not collect them. However, you will see some of these problem variations on tests!

GRADING

Grading Matrix: (This is an example)

Instrument	Value
HW Assignments, Daily Work, Quizzes	25%
Exams	50%
Final Exam	25%
Total:	100%

Grade Determination:
A = 90% or better
B = 80 – 89 %
C = 70 – 79 %
D = 60 – 69 %
F = less than 60%

TECHNOLOGY REQUIREMENTS

A computer algebra system will be used for some problem exploration, enhanced conceptual understanding, and to engage students as active participants in the learning process.

- **TI-83/84** or other calculators with similar capability is recommended.
- **A printer** to print homework and tests is recommended.
- **Scanner/digital camera/cell phone** that you can take pictures of your work and submit them to the Virtual Basket under D2L.
- **D2L:** As a student enrolled at East Texas A&M University, you have access to D2L. You will obtain course materials through D2L, (MyLe→ APPs→ D2L). The course materials are only for this course. You cannot distribute the course materials without the permission of the instructor. You also have an email account via myLeo - all my emails sent from D2L (and all other university emails) will go to this account, so please be sure to check your email regularly.

BROWSER SUPPORT

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

DESKTOP SUPPORT

Browser	**Supported** Browser **Version(s)**	**Maintenance** Browser **Version(s)**
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

TABLET AND MOBILE SUPPORT

Device	**Operating System**	Browser	**Supported** Browser **Version(s)**
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or **point** release of that major version) and the previous major version of iOS (the latest minor or **point** release of that major version). For example, as of June 7, 2017, D2Lsupports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser.
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
    - 512 MB of RAM, 1 GB or more preferred
    - Broadband connection required courses are heavily video intensive
    - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- You must have a:
    - Sound card, which is usually integrated into your desktop or laptop computer
    - Speakers or headphones.
    - *For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: JAVA web site http://www.java.com/en/download/manual.jsp

- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.
Pop-ups are allowed.
JavaScript is enabled.
Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - Adobe Reader https://get.adobe.com/reader/
  - Adobe Flash Player *(version 17 or later)* https://get.adobe.com/flashplayer/
  - Adobe Shockwave Player https://get.adobe.com/shockwave/
  - Apple Quick Time http://www.apple.com/quicktime/download/

At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu**.**

NOTE: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a ETAMU campus open computer lab, etc.

COMMUNICATION AND SUPPORT

BRIGHTSPACE SUPPORT

NEED HELP?

STUDENT SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

TECHNICAL SUPPORT

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words "click here" to submit an issue via email.

SYSTEM MAINTENANCE

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

INTERACTION WITH INSTRUCTOR STATEMENT

Student course-related questions or concerns through email are answered usually within 24 hours during week days (M-F). Feedback on assessments will be provided within 7 days after the assignment is submitted.

My primary form of communication with the class will be through the official university Email and Announcements. Any changes to the syllabus or other important information critical to the class will be disseminated to students in this way via your D2L Email address available to me through MyLeo and in Announcements. It will be your responsibility to check your official university Email and Announcements regularly.

Discussions: This space is for students to communicate with each other. I may visit Discussions and join your discussion. Please feel free to answer one another's questions. I will check answers (as well as questions) for correctness, but do not hesitate to respond to a posting if you feel you can answer the question thoroughly and directly.

STUDENT ACADEMIC RESOURCES

Math Skills Center (MSC): Free tutoring services are offered up to the level of Calculus I at the Math Skill Center (Binnion Room 328). The MSC will be open Monday-Thursday 10am–5pm, and Friday 10am–2pm.

The ETAMU One Stop Shop - provides as many student resources as possible in one location.
http://www.tamuc.edu/admissions/oneStopShop/

The ETAMU Academic Success Center provides academic resources to help you achieve academic success.
http://www.tamuc.edu/CampusLife/CampusServices/AcademicSuccessCenter/default.aspx

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures

Policy for Reporting Problems with eCollege

If students encounter D2L-based problems while submitting assignments and assessments, the following procedures MUST be followed.

1. Students must report the problem to the help desk. You may reach the helpdesk at helpdesk@online.tamuc.org or 1-866-656-5511
2. Students MUST file their problem with the helpdesk and obtain a helpdesk ticket number
3. Once a helpdesk ticket number is in your possession, students should email me to advise me of the problem and to provide me with the helpdesk ticket number
4. At that time I will call the helpdesk to confirm your problem and follow up with you.

PLEASE NOTE: Your personal computer/access problems are not a legitimate excuse for filing a ticket with the help desk. You are strongly encouraged to check for compatibility of your browser BEFORE the course begins and to take the eCollege tutorial offered for students who may require some extra assistance in navigating the eCollege platform. ONLY D2L-based problems are legitimate.

SYLLABUS CHANGE POLICY

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Academic Honesty

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including (but not limited to) receiving a failing grade on the assignment, the possibility of failure in the course and dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. In ALL instances, incidents of academic dishonesty will be reported to the Department Head. Please be aware that academic dishonesty includes (but is not limited to) cheating, plagiarism, and collusion.

Cheating is defined as:

- Copying another's test of assignment
- Communication with another during an exam or assignment (i.e. written, oral or otherwise)
- Giving or seeking aid from another when not permitted by the instructor
- Possessing or using unauthorized materials during the test
- Buying, using, stealing, transporting, or soliciting a test, draft of a test, or answer key

Plagiarism is defined as:

- Using someone else's work in your assignment without appropriate acknowledgement
- Making slight variations in the language and then failing to give credit to the source

Collusion is defined as:

- Collaborating with another, without authorization, when preparing an assignment

If you have any questions regarding academic dishonesty, ask. Otherwise, I will assume that you have full knowledge of the academic dishonesty policy and agree to the conditions as set forth in this syllabus.

AI use policy

East Texas A&M University 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

East Texas A&M Supports Students' Mental Health

The Counseling Center at East Texas A&M University, 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

ADA STATEMENT

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

East Texas A&M University
Gee Library- Room 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
Email: studentdisabilityservices@tamuc.edu
Website: Office of Student Disability Resources and Services
http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.
http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:
Netiquette http://www.albion.com/netiquette/corerules.html

ETAMU Attendance

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.
http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx

http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf

Copyright Policy

The handouts used in this course are copyrighted. By "handouts," I mean all materials generated for this course, which include but are not limited to syllabi, lecture notes, quizzes, exams, in-class materials, review sheets, projects, and problems sets. Because these materials are copyrighted, you do not have the right to copy and distribute the handouts.

NONDISCRIMINATION NOTICE

East Texas A&M University 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.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in East Texas A&M University 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 East Texas A&M Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:
http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all East Texas A&M campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COURSE OUTLINE / CALENDAR

WEEKLY SCHEDULE:
(Week 1: 8/18-8/22) Defining Limits, Limits from Graphs, Limits from tables, Properties of Limits
(Week 2: 8/25-8/29) Limits using Algebra, Squeeze Theorem
(Week 3: 9/2-9/5) Connecting Multiple Representations of Limits, TEST 1
(Week 4: 9/8-9/12) Types of Discontinuities, Define continuity at a point and on an interval, Infinite Limits and Limits at Infinity
(Week 5: 9/15-9/19) Intermediate Value Theorem, TEST 2
(Week 6: 9/22-9/26) Average Rate of Change vs Instantaneous Rate of Change, Define derivative, derivative notation, Connecting differentiability and continuity
(Week 7: 9/29-10/3) The Power Rule, constant, constant-multiple, sum/difference rules, Derivative of cos x, sin x, e^x, ln x, The Product Rule
(Week 8: 10/6-10/10) The Quotient Rule, derivatives of tan x, cot x, sec x, csc x, TEST 3
(Week 9: 10/13-10/17) The Chain Rule, Implicit Differentiation
(Week 10: 10/20-10/24) Differentiating Inverse Functions, Inverse Trig (pre-cal review), Derivatives of Inverse Trig Functions, Logarithmic Differentiation
(Week 11: 10/27-10/31) Higher Order Derivatives, TEST 4
(Week 12: 11/3-11/7) Mean Value Theorem, Critical Points, Increasing and Decreasing Intervals, First Derivative Test, Absolute Extrema from Candidates
(Week 13: 11/10-11/14) Concavity, Second Derivative Test, Sketching Graphs of Derivatives, Connecting f, f', f"
(Week 14: 11/17-11/21) Optimization, Behaviors of Implicit Relations, TEST 5
(Week 15: 12/1-12/5) Derivative in Context, Straight Line Motion, Contexts Other than Motion, Local Linearity and Linearization, L'Hôpital's Rule
(Week 16: 12/8-12/12) Related Rates, TEST 6
(Week 17: 1/6-1/9) Accumulation of Change, Riemann Sums
(Week 18: 1/12-1/16) Summation Notation, The Fundamental Thm of Calculus, Behavior of Accumulation Functions
(Week 19: 1/20-1/23) TEST 7, Properties of Definite Integrals, Definite Integrals

(Week 20: 1/26-1/30) Indefinite Integrals, integrating with Substitution, Integrating with Long Division and Completing the Square
(Week 21: 2/2-2/6) Selecting Techniques for Antidifferentiation, TEST 8
(Week 22: 2/9-2/13) Modeling with Differential Equations, Verifying Solutions for Differential Equations, Sketching Slope Fields, Reasoning Using Slope Fields
(Week 23: 2/16-2/20) General and Particular Solutions using Separation of Variables, Exponential Models with Differential Equations
(Week 24: (2/23-2/27) TEST 9, Average Value of a Function, Connecting, Position, Velocity, and Acceleration
(Week 25: 3/2-3/6) Applying Accumulation and Integrals, TEST 10
(Week 26: 3/16-3/20) Area between Curves, Area with More than Two Intersections
(Week 27: 3/23-3/27) Volumes with known Cross Sections, Volume-Disk Method
(Week 28: 3/30-4/3) Volume- Washer Method, TEST 11
(Week 29: 4/6-4/10) Cumulative Review
(Week 30: 4/13-4/17) Cumulative Review
(Week 31: 4/20-4/24) Cumulative Review, TEST 12
(Week 32: 4/27-5/1) Final Exam Review and 'Study Days'

Notes:
This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by email and in-class announcements.