Instructor: Dr. Susan Abernathy-Taylor
Email: susan.abernathy@angelo.edu
Phone: 325-486-5442
Office: MCS 220i

Office Hours: MW 10am-1pm, TR 2-4pm. All office hours will be held online through Blackboard Collaborate. Links can be found in Blackboard.

Course Information

Course Description
Calculus of functions of one variable including a study of limits, continuity, differentiation of different classes of functions, applications of the derivative, introduction to the integral, the relationship between the derivative and integral, and the Fundamental Theorem of Calculus.

Prerequisite and Co-requisite Courses
Math 1316 and 2312; or a suitable score on a placement exam.

Course Delivery
This is an online course that will be delivered via Blackboard. If you choose, you can complete the course without visiting ASU’s campus. There are no class meetings.

Required Texts and Materials
Calculus Volume 1 from OpenStax1. This is a free textbook available online. You can also purchase a print version, if you prefer, via the campus bookstore.

Technology Requirements
Required:
- A computer (desktop/laptop) or mobile device (phone/tablet) that can access the internet.
- Access to a stable internet connection.
- Respondus Lockdown Browser software for tests. Respondus requires a desktop computer or laptop (not a Chromebook).
- Speakers/earbuds/headphones for listening to videos.
- Internet browsing software (such as Mozilla Firefox or Google Chrome).
- PDF-viewing software (such as Adobe Acrobat Reader).

Optional:
- Device with a microphone for chatting with the professor during online office hours through Blackboard Collaborate.

Communication
Faculty will usually respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until the next work day.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

Student Responsibilities and Tips for Success:
- Maintain academic honesty. Don’t cheat.
- Be prepared to devote time to this class – if this class were in-person, you would spend three hours a week in class, plus extra to work on homework.
- Keep up with due dates. All homework due dates and test dates are set from the beginning of the semester. Make a calendar or set reminders on your phone.
- Take notes as if you were in class while watching videos and reading the book.
- Organize your notes in a notebook or binder.
- Be proactive about your grade in this course. You are not given a grade in a college course; you EARN your grade, based on completion of the course requirements and how well you demonstrate your understanding of the material to the professor. You may want or need a particular grade to graduate, maintain a scholarship, or stay in athletics, for instance. It is your responsibility to put in as much effort as it takes to earn your desired grade.

Grading

Grading System
Grades will be determined as follows:
- Quizzes (6): 72% (12% each)
- Homework: 8%
- Cumulative Final Exam: 20%
Course grades will be dependent upon completing course requirements and meeting the student learning outcomes. **Grades will not be rounded up.**

The following grading scale is in use for this course:

- A = 89.5-100 points
- B = 79.5-89.49 points
- C = 69.5-79.49 points
- D = 59.5-69.49 points
- F = 0-59.49 points

**Quizzes and Final Exam**

Six quizzes will be administered during the course online through [Gradescope](#), likely using Respondus Lockdown Browser (both are available to you at no cost). There will also be a cumulative final exam at the end of the semester. If it benefits you, your final exam grade will replace your lowest quiz grade. Each quiz will be open for at least 48 hours and may be completed during that window whenever is convenient for you. It is your responsibility to start early enough so that you have enough time to complete the test.

Quiz and Final Exam dates are listed here.

- Quiz 1: February 8-9
- Quiz 2: February 25-26
- Quiz 3: March 11-12
- Quiz 4: March 25-26
- Quiz 5: April 12-13
- Quiz 6: April 29-30
- Final Exam: May 10-11

Make-up tests are given only under extreme circumstances at the discretion of the instructor.

**Homework**

There will be a written homework assignment from the textbook for each section, which you will submit online through Blackboard as a PDF. Your lowest three homework grades will be dropped to account for unforeseen circumstances. **Late homework will not be accepted.**

**Course Schedule**

This subject matter listed below is tentative and subject to change. For current information about course topics, please contact the instructor.
Subject matter by week:
1. 1.1, 1.2
2. 1.3-1.5, 2.1
3. 2.2, Quiz 1, 2.3
4. 2.4, 3.1, 3.2
5. 3.3, 3.4, Quiz 2
6. 3.5, 3.6
7. 3.7, 3.8, Quiz 3
8. 3.9, 4.1
9. 4.3, 4.4, Quiz 4
10. 4.5-4.7
11. 4.8, 4.10
12. Quiz 5, 5.1, 5.2
13. 5.3, 5.4
14. 5.5, Quiz 6
15. Review
16. Final Exam

Student Learning Outcomes

1. Students will demonstrate factual knowledge including the mathematical notation and terminology used in this course. Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in Calculus I as they pertain to functions, limits, derivatives, and integrals.

2. Students will describe the fundamental principles including the laws and theorems arising from the concepts covered in this course. Students will identify and apply the laws and formulas that result directly from the definitions; for example, domain and range of a function, operations on functions, the limit laws, the differentiation formulas, and the Fundamental Theorem of Calculus.

3. Students will apply course material along with techniques and procedures covered in this course to solve problems. Students will use the facts, formulas, and techniques learned in this course to sketch graphs of functions, to study position-velocity-acceleration problems, to solve related rate and optimization (“max-min”) problems, and to determine the area under the curve of a function.

4. Students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields. Students will acquire a level of proficiency in the fundamental concepts and applications necessary for further study in academic areas requiring Calculus I as a prerequisite, or for work in occupational fields requiring a background in Calculus I. These fields might include computer science, engineering, the physical and natural sciences as well as mathematics.
Course Content

**Textbook:** Calculus Volume 1 from OpenStax. This is a free textbook available online at [https://openstax.org/details/books/calculus-volume-1](https://openstax.org/details/books/calculus-volume-1). You can also purchase a print version, if you prefer, via the campus bookstore.

The following topics are covered.

1. **Functions and Graphs:** Review of Functions, Basic Classes of Functions, Trigonometric Functions, Inverse Functions, Exponential and Logarithmic Functions
3. **Derivatives:** Defining the Derivative, The Derivative as a Function, Differentiation Rules, Derivatives as Rates of Changes, Derivatives of Trigonometric Functions, The Chain Rule, Derivatives of Inverse Functions, Implicit Differentiation, Derivatives of Exponential and Logarithmic Functions
5. **Integration:** Approximating Areas, The Definite Integral, The Fundamental Theorem of Calculus, Integration Formulas and the Net Change Theorem, Substitution

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)
- [Angelo State University Catalog](#)

**Required Use of Masks/Facial Coverings by Students**

As a member of the Texas Tech University System, Angelo State University has adopted the mandatory [Facial Covering Policy](#) to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of
everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.

**Academic Integrity**
Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university's [Statement of Academic Integrity](#).²

**Accommodations for Students with Disabilities**
ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website.¹⁰ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
dallas.swafford@angelo.edu  
Houston Harte University Center, Room 112
Incomplete Grade Policy
It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

Plagiarism
Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the ASU Writing Center.

Student Absence for Observance of Religious Holy Days
A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.

Title IX at Angelo State University
The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Miller, J.D.
Special Assistant to the President and Title IX Coordinator
You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

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i College Algebra textbook from OpenStax: https://www.openstax.org/details/college-algebra
iii Google Chrome browser: https://www.google.com/chrome/
iv Adobe Acrobat Reader: https://get.adobe.com/reader/
v Gradescope: www.gradescope.com
6 https://www.angelo.edu/current-students/student-handbook/
7 https://www.angelo.edu/academics/catalog/
8 http://www.texastech.edu/downloads/ttus-policy-face-coverings.pdf
10 https://www.angelo.edu/current-students/disability-services/
11 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
13 https://www.angelo.edu/current-students/writing-center/academic_honesty.php
14 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of