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

Office Hours: MW 10am-1pm, TR 12:15-2:15pm, or by appointment.

Course Information

Course Meetings

Monday, Tuesday, Wednesday, and Friday in MCS 214  
MWF meeting time: 9:00-9:50am  
Tues meeting time: 9:30-10:20am

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 Courses

Math 1316 and 2312; or a suitable score on a placement exam.

Required Texts and Materials

Calculus Volume 1 from OpenStax. This is a free textbook available online. You can also purchase a print version, if you prefer, via the campus bookstore.
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 should 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

The student is solely responsible for:

- Staying home and completing the Wellness Screening in Ramport if you are experiencing any symptoms of COVID-19 or have known exposure to a person who has tested positive.
- Maintaining academic honesty.
- Completing each assignment by the specified due date.
- Obtaining assignments (graded or newly assigned) and other materials for classes missed.
- Positively contributing to the classroom environment. Be courteous; don’t use your phone in class; be on time; don’t disrupt your fellow classmates.
- Being proactive about their grade in this course. You are not given a grade in a college course; you EARN your grade. 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 this grade. This includes utilizing (as needed) all available study aid options (going to office hours and/or Math Lab, reading outside textbooks, meeting with the instructor, etc.) to resolve any questions or concerns you might have about any aspect of the course.

Grading

Grading System

Your overall grade in this class will be the average of your six test grades. If it benefits you, your homework average may replace your lowest test grade. 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
Tests and Final Exam

There will be 6 tests during the semester. These will be during class, usually on a Friday. If it benefits you, your homework average may replace your lowest test grade at the end of the semester. There will also be a cumulative final exam at the end of the semester. The final exam affects your overall grade as follows: if you score below a 60%, your overall grade will be lowered by one letter grade; if you score at least a 90% on the final exam, your overall grade will be increased by one letter grade; otherwise, your overall grade will remain the same (the average of your six test grades).

Test and Final Exam dates are listed here.
- Test 1: Friday, September 3
- Test 2: Wednesday, September 22
- Test 3: Friday, October 8
- Test 4: Friday, October 22
- Test 5: Friday, November 5
- Test 6: Friday, November 19
- Final Exam: Wednesday, December 8, 8:00-10:00am

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. Homework will count toward bonus on each quiz. If it benefits you, your homework average may replace your lowest test grade at the end of the semester. 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. Chapter 1
2. 2.1-2.3, Test 1
3. 2.4, 3.1, 3.2
4. 3.3, 3.4
5. 3.5, Test 2, 3.6
6. 3.6-3.8
7. 3.9, 4.1, Test 3
8. 4.3-4.5
9. 4.6, 4.7, Test 4
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](#)

### Information About COVID-19

Please refer to ASU’s [COVID-19 (Coronavirus) Updates](#) web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

### 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](#).

### 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.\(^6\)

The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dr. 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\(^7\) for more information.

**Plagiarism**

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy\(^6\) 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.\(^8\)

**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\(^9\) for more information.
Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: Incident Reporting Form
Face to Face: Mayer Administration Building, Room 210
Phone: 325-942-2022
Email: michelle.miller@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State’s policy please visit the Title IX website.

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1 College Algebra textbook from OpenStax: https://www.openstax.org/details/college-algebra
2 https://www.angelo.edu/current-students/student-handbook/
3 https://www.angelo.edu/academics/catalog/
4 https://www.angelo.edu/covid-19/
5 https://www.angelo.edu/live/files/27603-student-handbook-2020-21#page=96
6 https://www.angelo.edu/current-students/disability-services/
7 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
8 https://www.angelo.edu/current-students/writing-center/academic_honesty.php
9 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of
10 https://www.angelo.edu/incident-form
11 https://www.angelo.edu/title-ix