Calculus 2
Summer 2, 2019

Course no.  2314.010
Instructor  Trey Smith
Time       MTWRF 12:00-1:45
Location   MCS 216
Office     MCS 219A
Office Hours MTWRF : 2:00-3:00
             Others by Appointment
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Grading     The Grade will be determined using two exams worth 35% each, and a
             homework/quiz grade worth 30%.
Homework    You will be assigned homework every class period. The next class, the
             homework will generally be collected or a quiz given.
Attendance  Regular class attendance is expected. There will be no make-up for missed
             homework or quiz, so a missed day may result in a zero.
Calculators Calculators will generally not be allowed during exams.

Course Outline The following is a tentative outline of the material to be covered. I reserve
the right to change the material and/or sequence.

Topics by Week

1) Review of Limits
2) Review of Derivatives
3) Review of Antiderivatives
4) The Definite Integral
5) The Fundamental Theorem of Calculus
6) The Substitution Rule
7) More Substitution Rule
8) Trigonometric Integrals
9) Integration by Parts
10) More Integration by Parts
11) Review for Test 1
12) Test 1 (July 23rd)
13) Trigonometric Substitutions
14) Partial Fraction Decompositions
15) Review of all integration techniques
16) Areas And Volumes
17) Applications
18) Applications
19) Parametric Equations
20) Polar Equations
21) Polar Equations
22) Review
23) Final Exam (August 7th)

General University Policies

Student Disability Services
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.
The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu

Title IX
Angelo State University is committed to the safety and security of all students. If you or someone you know experience sexual harassment, sexual assault, domestic or dating violence, stalking, or discrimination, you may contact ASU’s Title IX Coordinator:

Michelle Boone
Director of Title IX Compliance
325-486-6357
michelle.boone@angelo.edu

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. (http://www.angelo.edu/opmanual/ -- OP 10.19)

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.
Student Conduct Policies

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 Statement of Academic Integrity.

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 via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

Copyright Policy
Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers. 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

Student Learning Outcomes

1. The 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 II as they pertain to integrals, parametric equations, and polar coordinates.

2. The 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, integral formulas and integration techniques, and applying calculus operations to parametric and polar equations.

3. The students will apply course material along with techniques and procedures covered in this course to solve problems. Students will use the facts, formulas,
4. The 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 II as a prerequisite, or for work in occupational fields requiring a background in Calculus II. These fields might include computer science, engineering, the physical and natural sciences as well as mathematics.

Textbook: *Essential Calculus: Early Transcendentals, 2nd ed.* by James Stewart. The following chapters are covered. (See textbook "Contents")

5. Integrals. Areas, the definition of the definite integral, the Fundamental Theorem of Calculus, properties of the definite integral, indefinite integrals, substitution.

6. Techniques of Integration. Integration by parts, trigonometric integrals, trigonometric substitution, completing the square, integration by partial fractions, improper integrals.

7. Applications of Integration. Areas, volumes, arc length, applications to physics and engineering.

9. Parametric Equations; Polar Equations. Parametric equations: definition, tangents and areas, arc length and surface area; polar equations: definition, areas, and length, conic sections.