Calculus 2

Spring 2020

Course no. 2414.020
Instructor Trey Smith
Time MF: 1:00-2:00, TR: 12:30-1:30
Location MCS 216
Office MCS 219A
Hours MTWRF : 11:00-12:00, 2:00-3:00
Others by Appointment
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Grading This is a Standards Based Course; you will need to demonstrate mastery of twelve different standards in order to be successful. You will do this by taking twelve quizzes – one for each standard. These quizzes will be given on the Fridays (with exception of Quiz 9 and Quiz 10 given on Wednesday, 5.8) designated in the schedule below. You will receive credit for a 70% or above on each quiz. If you make less than 70%, you will receive no credit. Your final grade will be computed using the averages of those twelve quizzes subject to the final exam which will be discussed below. There is a worksheet included at the end of this syllabus to help you keep up with your quiz grades. You are encouraged to print this and keep it in your notebook.

The final exam will affect your grade in the following way: if you score less than 60% on the final, your quiz average will be reduced by a letter grade. If you score a 90% or above on the final, your grade will improve by a letter grade.

Homework You will be assigned homework every class period. The next class, the homework will generally be collected or a daily quiz based on the homework given. You may replace one of your standards quiz grades with your homework average.

Attendance Regular class attendance is expected. There will be no make-up for missed homework, 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) Calculus 1 Review
2) The Substitution Rule, Q1, Q2 (1.24)
3) Trigonometric Integrals
4) Integration by Parts Q3, Q4 (2.7)
5) Trigonometric Substitutions
6) Partial Fraction Decomposition Q5, Q6 (2.21)
7) Approximation and Improper Integrals
8) Applications (Area and Volume)
9) Applications (Physics) Q7, Q8 (3.20)
10) Sequences and Series
11) Sequences and Series
12) Power Series Q9, Q10 (Wed, 5.8)
13) Parametric Equations
14) Polar Q11, Q12 (4.24)
15) Review
16) Final Exam (5.6, 1:00-3:00)

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:
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. 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. This is done in order to connect students with resources and options in addressing the allegations reported. As a student, 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. You may do so by contacting:

Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
michelle.boone@angelo.edu

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.

The Office of Title IX Compliance also provides accommodations related to pregnancy (such as communicating with your professors regarding medically necessary absences, modifications required because of pregnancy, etc.). If you are pregnant and need assistance or accommodations, please contact the Office of Title IX Compliance utilizing the information above.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.
**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/](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](http://www.angelo.edu/opmanual/) 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](http://www.angelo.edu/opmanual/).

**Plagiarism**
Plagiarism is a serious topic covered in ASU’s [Academic Integrity policy](http://www.angelo.edu/opmanual/) 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](http://www.angelo.edu/opmanual/).

**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](http://www.angelo.edu/opmanual/) and [Angelo State University Catalog](http://www.angelo.edu/opmanual/).
**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, series, 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, and techniques learned in this course to calculate areas, volumes, and surface areas; to find lengths of curves; to determine series convergence; to analyze problems in physics.

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. Chapters 6, 7, 8, and 9 are covered (see the outline above).
Standards Quiz Worksheet

Procedure:
You will be expected to take two quizzes on each of the six designated Quiz Days. If you do not pass a particular quiz, you may come by my office and set up a time to take it. There is currently no limit on the number of times you may take a quiz, but if a quiz is taken outside of my class, it will be during my office hours or at another time convenient for me. Also, if you take a quiz in order to improve your grade, you will receive the result of the new quiz regardless of whether the score is lower or higher.

The last day for you to retake quizzes 1 through 10 is Thursday, April 23rd. The last day to take quizzes 11 and 12 is Friday, May 1st.

Standards:

1) __________ Review Material
2) __________ The Substitution Rule
3) __________ Trigonometric Integrals
4) __________ Integration by Parts
5) __________ Trigonometric Substitutions
6) __________ Partial Fraction Decomposition
7) __________ Approximation and Improper Integrals
8) __________ Applications
9) __________ Sequences and Series
10) __________ Power Series
11) __________ Parametric Equations
12) __________ Polar