Welcome to
MATH 172, Section 501
Calculus II
MWF 10:20 – 11:10 am, ZACH 119D; T 3:55 – 4:45 pm, ZACH 119C

Instructor:
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Instructor’s Office Hours (subject to occasional change/cancellation):
MW 11:30 am to 1:00 pm, and by appointment

Prerequisite:
MATH 147/151/171 or equivalent, with a grade of C or better

Textbook:
Calculus: Early Vectors, by James Stewart

Grading:
There will be three examinations in all. Your overall total will be the higher of the two scores calculated using the following methods: 30% for the best examination score, 25% for the second best, 20% for the third best, and 25% for assignments (Method 1); 25% each for the first and second best exam scores, 20% for the third best, and 30% for assignments (Method 2). Letter-grade assignments will be at least as generous as the following (standard) scale: < 60 → F; ≥ 60 < 70 → D; ≥ 70 < 80 → C; ≥ 80 < 90 → B; ≥ 90 → A.

Examinations:
Examination I (tentative): Thursday, October 9th, 7:00 – 9:00 pm
Examination II (tentative): Thursday, November 13th, 7:00 – 9:00 pm
Examination III: Tuesday, December 16th, 8:00 – 10:00 am

Course outline (section numbers refer to Stewart’s text):
This is a projected roadmap of the course. Modifications necessitated by circumstances are inevitable. Some of these sections, along with others in the text, may be assigned for reading.

Week 1:
Review (Riemann integral, Fundamental Theorem of Calculus) (Sections 6.2-6.4), Integration by substitution (6.5), Area between curves (7.1)

Week 2:
Section 7.1 (continued), Volumes by slicing, discs, washers (7.2)

Week 3:
Volumes via shells (7.3), Work (7.4)

Week 4:
Average (7.5), Integration by parts (8.1), Trigonometric integrals (8.2)

Week 5:
Integration using trigonometric substitutions (8.3), Partial-fraction decompositions and associated integration techniques (8.4)

Week 6:
Infinite/Improper integrals (8.9), Arc length (9.3), Area of surfaces of revolution (9.4)

Week 7:
Introduction to sequences and series (10.1, 10.2)

Weeks 8 and 9:
Series, the saga continues (10.2–10.4)
Week 10:
Power series, functions represented by power series (10.5, 10.6)

Weeks 11 - 15:
Taylor and Maclaurin series, Applications (10.7, 10.9), Binomial series (10.8)

Learning objectives and outcomes:
This course is intended to provide students with quantitative and problem-solving skills in integral calculus, sequences, and series. At the end of the course, students should be thoroughly familiar with the following: (i) techniques and applications of integration, (ii) convergence/divergence of sequences and series, (iii) power series and applications. As this is a course targeted towards maths majors, emphasis will be laid on conceptual understanding and mathematical formality (as applicable). In addition to tackling the usual routine aspects/computational problems, students will also be expected to present simple proofs, definitions, statements of theorems, and the like, in a sound fashion.

Some important dates:
Friday, Nov 21: Last day to Q-drop
November 27th and 28th: Thanksgiving holidays
Monday, December 8th, and Tuesday, December 9th: Redefined days - classes on Monday will follow Friday’s timetable whereas classes on Tuesday will follow Thursday’s timetable
December 10th and 11th: Reading days - no classes

Make-up policy:
University regulations state the following: To be excused the student must notify his or her instructor in writing (acknowledged e-mail message is acceptable) prior to the date of absence if such notification is feasible. In cases where advance notification is not feasible (e.g. accident, or emergency) the student must provide notification by the end of the second working day after the absence. This notification should include an explanation of why notice could not be sent prior to the class.

General remarks:
• Americans with Disabilities Act: 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 believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Room 126 of the Koldus Building or call 845-1637.

• Academic Integrity: The Aggie Honor Code states the following: “An Aggie does not lie, cheat, or steal or tolerate those who do.” The Honor Council Rules and Procedures may be found here: http://www.tamu.edu/aggiehonor

Age is an issue of mind over matter. If you don’t mind, it doesn’t matter.
– Mark Twain