Calculus II: MATH 2425-200 (Fall 2016)

Instructor: Dr. Dan Warren

Office Number: PKH 440

Office Telephone Number: 817-272-5675

Email Address: dan.warren@uta.edu **(preferred form of communication)**

Office Hours:

Monday	2:00 – 4:00
Tuesday	11:00 – 1:50
Wednesday	3:00 – 5:20
Thursday	3:30 – 5:00
Friday	12:10 – 2:10

Section Information: MATH 2425-200

Time and Place of Class Meetings: MWF 11:00 – 11:50 in PKH 102 (Lecture)
MW 10:00 am - 10:50 am, PKH 302 (Lab Section 201)
MW 1:00 pm - 1:50pm, PKH 309 (Lab Section 202)

Required Textbook And Other Course Materials

Calculus, Early Transcendentals, Second Edition, by Briggs, Cochran, Gillett.

Online Homework System: www.uta.mylabsplus.com Students are pre-registered based on course enrollment. A handout is posted on Blackboard with instructions. All you need to do is login, enter or buy an access code, and then you are up and running.

Prerequisites

A grade of C or better in MATH 1426 (Calculus 1) is required.

Description of Course Content

This course includes the study of applications and techniques of integration, parametric equations, polar coordinates, sequences, series, vectors, dot products, cross products planes and quadratic surfaces.

Student Learning Outcomes

Upon completion of Math 2425, the student should be able to:

1. Compute the area between two curves, in both rectangular and polar coordinates; compute volumes and surface areas of solids of revolution, in both rectangular and polar coordinates; computes arc length of both polar and rectangular curves;
2. Compute the value of integrals by the method of integration by parts, trigonometric substitution and partial fractions;
3. Compute the values of improper integrals;
4. Compute the limits of sequences and series;
5. Determine the radius of convergence of power series; differentiate and integrate power series;
6. Represent a known function as a Taylor series; approximate a known function with a Taylor polynomial and determine the error involved;
7. Compute the standard representation of a vector in 3-space; compute the dot product and cross product of vectors;
8. Write equations of lines, planes, and quadric surfaces in 3-space;
9. Justify and explain their steps in problem solving. In particular, students should be able to construct correct and detailed mathematical arguments to justify their claimed solutions to problems.

Grading Scale

A: 90-100 **B**: 80-89 **C**: 70-79 **D**: 60-69 **F**: 0-59

Grade Components and Major Assignments and Examinations

Online Homework (MyLabsPlus)……5%
Quizzes……5%
Lab Attendance and Worksheets……10%
Midterm 1 (Friday, 23-Sep-16, 6-8pm)……20%
Midterm 2 (Friday, 28-Oct-16, 6-8pm)……25%
Final Exam (Saturday, 10-Dec-16, 12:30-3pm)……35%

Online Homework

Attached is the departmental assignment sheet for MATH 2425. Students are expected to be able to work all problems on this sheet by the end of the course, although they are NOT collected as part of your grade. It is your responsibility to stay current on the homework. The exam problems and the weekly quizzes are typically based on the problems found on this sheet.

A student must have access to MyLabsPlus for this course as part of your grade will be based on the completion of homework assignments online. The problems will be similar to those off of the assignment sheet. Your homework grade is only based on the online homework.

Expectation for Out of Class Study

Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend an additional 12 hours per week of their own time on focused course-related activities, including reading the Calculus text, completing assignments, and preparing for exams and quizzes.

Quizzes

Quizzes will be administered during your lab section each Wednesday. They will consist of 1-3 problems similar to those on the assignment sheet.

I will keep the top 10 quiz grades. You must be present for the entire lab session in order to take the quiz.

Each Wednesday, prior to taking your quiz, the lab session will be spent in recitation. This is your opportunity to ask the TA questions from homework, lecture, concepts, etc.

Lab Attendance and Worksheets

Each Monday, your lab section will consist of a problem solving worksheet. These are intended to be more in-depth than the problems on the assignment sheet and are to be worked out in groups. Therefore, you will turn in the lab worksheets in groups of 2-3 (no more, no less).

The lab assignments will be due at the end of the lab that day. You must be present for the entire lab in order to turn in the lab assignment with your group. Because your lab will be due at the end of the hour, the previous week you will receive a Pre-Lab Assignment, which will constitute 20% of your lab grade for that day. These must be completed before you arrive for the associated lab as they will help you complete the lab in a timely manner. The Pre-lab assignment aims to allow you to work important questions and seek answers to them prior to encountering the associated lab.

I will keep the top 10 lab grades. If you are more than 25 minutes late you will be considered absent. Also, you may not leave lab early. If you do so, you will be considered absent for the day. If you are absent on the day of a problem solving activity, you will not be part of a lab group for that week. If after receiving approval for an excused absence (with documentation) from the instructor, you may submit the missed lab work individually.

Attendance

At the University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I have decided that attendance at all class lectures is required, but attendance will not be taken nor directly factored into your grade. Any student who misses a lecture for any reason is responsible for missed material and missed announcements. Attendance is required to receive credit for problem solving activities, as noted and underlined above. Attendance is required at recitation sections to take and receive credit for quizzes, as noted and underline above.

Grading

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels. See "Student Support Services" below.

Midterms & Final Exam

These exams are departmental, i.e., all sections of Math 2425 will take the same exam and the grades will have the same weight in each section. All of these exams are comprehensive. Each exam will be a mix of multiple choice problems and show-your-work problems.

Any student who scores below 50 on the final exam cannot receive a grade higher than D in the course.

You may access recent previous midterms and some of the finals online. Go to https://mavspace.uta.edu/xythoswfs/webview/_xy-698342_1.

Solutions to the multiple choice questions are available at https://mavspace.uta.edu/xythoswfs/webui/_xy-1084452_1-t_BulwoeEK.

Make-up Policy

Make-up Policy: If you have a conflict with either midterm or final, you must contact your instructor no later than 5pm on the Census Date (12-Sep-2016), by using a form provided to you at your request by your instructor & submitting it together with necessary documentation as indicated on the form. If a conflict arises after September 12, contact your instructor immediately. **Delays in submitting a make-up request may mean that your request cannot be approved by the course coordinator.**

Makeups for quizzes will only be given for university activities such as athletics and illness with a doctor's note.

Calculator Policy

You must only use nonprogrammable calculators with basic computational features, such as arithmetic and transcendental functions. You may NOT use any calculator with the following capabilities: graphing, equation solving, differentiation, integration, QWERTY keyboard, and any device that has internet capabilities (This means NO CELL PHONES, TABLETS, ETC). Approved calculators are.

Texas Instruments 30X series: TI-30Xa, TI-30X-IIS, TI-30XS

Casio fx-80's series: Casio fx-82M-S, Casio fx-85M-S

Sharp EL-531 series

If you would like to use another calculator, you must get it approved by me BEFORE the exam date. Failure to do so may result in not being able to use a calculator on you exam. The same calculator policy applies to labs and quizzes. If you are caught using a non-approved calculator during a quiz or exam, YOU WILL AT A MINIMUM RECEIVE A GRADE OF ZERO for that exam or quiz, and if it is a quiz, that zero CANNOT BE DROPPED.

Student Support Services

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Math Clinic

The Math Department operates the Math Clinic, a tutoring service staffed by upper level undergraduate students. The Math Clinic is on the 3rd floor of Pickard Hall; the phone number is 817-272-5674; and the hours of operation for fall and spring are

Monday – Thursday……8:00a – 9:00p
Friday……8:00a – 1:00p
Saturday……1:00p – 6:00p
Sunday……1:00p – 9:00p

Go to the Math Clinic webpage http://www.uta.edu/math/clinic/ to get more information or to access assignment sheets for the courses for which tutoring is offered.

Science Education and Career Center (SECC)

All previous midterm exams and some previous final exams are available to students in the Science Education and Career Center (SECC), 106 Life Science Building. The fall and spring hours of operation are

Monday-Thursday……8:00a – 8:00p
Friday……8:00a – 5:00p
Saturday……12:00p – 5:00p

You need a Mav ID Card to check out these exams. A copy machine is available for you to make copies. There are also video tapes of lectures on calculus topics that can be viewed in the SECC. For more information, go to https://www.uta.edu/cos/SECC/login.php.

Tutor List

The Math Department maintains a list of people who have expressed an interest in tutoring. These persons are not necessarily recommended by the Math Department and they set their own fees. You may obtain a copy of the tutor list in the Math Office, 478 PKH.

IDEAS Center

The IDEAS Center (2nd Floor of Central Library) offers free tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email IDEAS@uta.edu or call (817)272-6593.

Drop Policy

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/). Any student who drops this course on or before Wednesday, November 2nd at 4 PM will receive a W.

Americans with Disabilities Act

The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act.* All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. **Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD).** Please do so no later than the census date 12-September-2016. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting: The Office for Students with Disabilities (OSD) www.uta.edu/disability or calling (817)272-3354. Counseling and Psychological Services (CAPS) www.uta.edu/caps or calling (817)272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accomodations can be found at www.uta.edu/disability or by callign the Office for Students with Disabilities at (817)272-3364.

If you require an accommodation based on disability, I would like to meet with you in the privacy of my office, during the first week of the semester, to make sure you are appropriately accommodated.

Email Policy

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Drop for Non-Payment of Tuition

If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar's Office.

Academic Integrity

Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Student Feedback Survey

At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Grade Replacement & Exclusion

These policies are described in detail in the University catalog and can also be founded online at http://wweb.uta.edu/catalog/content/general/academic_regulations.aspx#10 (scroll about half way down the page).

Emergency Exit Procedures

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals. Fire: move to corner stairwells and descend in an orderly fashion. Tornado/Inclement Weather: use central stairwell to go to 1st floor safety rooms.

Student Disruption

The University reserves the right to impose disciplinary action for an infraction of University policies. For example, engagement in conduct, alone or with others, intended to obstruct, disrupt, or interfere with, or which in fact obstructs, disrupts, or interferes with, any function or activity sponsored, authorized by or participated in by the University.

Campus Carry

Effective 1-August-2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit http://www.uta.edu/news/info/campus-carry/

Title IX

The University of Texas at Arlington is committed to maintaining a learning and working environment that is free from discrimination based on sec in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE AcT). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817)272-7091 or jmhood@uta.edu.

Important Dates

2016

Sep 12 (Mon) .....Census Date & Deadline for ALL Make-up Exam Requests
Sep 23 (Fri) .....Midterm 1
Oct 28 (Fri) .....Midterm 2
Nov 2 (Wed) .....Last Day to Drop Classes (4 PM)
Nov 24-25 (Thu-Fri) .....Thanksgiving Break
Dec 7 (Wed) .....Last Day of Classes
Dec 10 (Sat) .....Final Exam

Tentative Course Schedule

22-Aug	7.1 Basics / review
	7.3 Trigonometric Integrals
to	7.2 Integration by Parts
15-Sep	7.4 Trigonometric Substitutions
	7.5 Partial Fractions
	7.8 Improper Integrals
	8.1-8.2 Sequences
20-Sep	Review (tentative)
23-Sep	Review
23-Sep	Midterm 1, 6p-8p
27-Sep	8.3 Series
to	8.4 The Integral Test
20-Oct	8.5 Root, Ratio, Comparison Tests, Absolute Convergence
	8.6 Alternating Series
	9.1 Approximating with Polynomials
	9.2 Power Series
	9.3, 9.4 Taylor & Maclaurin Series
25-Oct	Review (tentative)
27-Oct	Review
28-Oct	Midterm 2, 6p-8p
1-Nov	6.3 Volume, Disk / Slicing Method
to	6.4 Volume, Shell Method
29-Nov	6.5, 6.6 Arc Length & Surface Area
	6.7 Physical Applications
	10.1 Plane Curves and Parametric Equations
	10.2 Polar Coordinates
	10.3 Calculus in Polar Coordinates
1-Dec	Review
6-Dec	Review
10-Dec	Final Exam, 12:30p-3p