MATH 2425-200: Calculus II
Course Syllabus: Fall 2019

Instructor Information:

Instructor: Saber Ahmed

Office Number: PKH 430

Office Telephone Number: N/A

Email Address: saber.ahmed@uta.edu (preferred form of communication)

Faculty Profile: https://mentis.uta.edu/explore/profile/saber-ahmed

Office Hours: M 1:00pm-3:30pm
W: 2:00pm-3:30pm
TH: 9:30am-10:30am
F: 10:00am-10:50am
- *(If you cannot come during these times, you may ask me through e-mail to set up an appointment.)*

Course Information:

Section Information: MATH 2425-200

Time and Place of Class Meetings:

Lecture:	CH 106,	MWF 11:00AM - 11:50AM
Lab - 201:	PKH 319,	MW 10:00AM - 10:50AM
Lab - 202:	PKH 305,	MW 1:00PM - 1:50PM

Uniform Exams:

Midterm One: Fri Sep 20, 6:00pm-8:00pm
Midterm Two: Fri Oct 25, 6:00pm-8:00pm
Final Exam: (required) Sat Dec 7, 12:30pm-3:00pm

Description of Course Content: This course includes the study of applications of integration, techniques of integration, parametric equations, polar coordinates, sequences, and series. Prerequisite: C or better in MATH 1426 or HONR-SC 1426.

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. 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.

Required Textbooks and Other Course Materials

E-Text and Digital Access: Your course materials include the e-version of the course text as well as MyLab course access which is designed to enrich student success by providing instant feedback on your assignments plus on-demand access to personalized study plans, a multimedia library, practice tests, and more. *2425 MATH DDA-CALCULUS 2 (0812) (CUSTOM), Pearson, 3rd edition. ISBN: 9780135798720*
To receive the discounted price and ensure uninterrupted access, purchase course materials through the UTA Bookstore **using your name and MAVS email address**

Every student has trial access to MyLab course materials as soon as the course is available in Canvas, so you can start working on your course even before you purchase your course materials! That said, students will need a verified purchase within the first two weeks of classes. Otherwise, the access to your digital materials will freeze and your account will stay deactivated until the purchase is confirmed.

Digital purchases provide access for one term. In accordance with the UTA bookstore return policy, digital purchases may be returned only up until the campus census date for each respective term.

Calculator: You must only 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, SMART WATCHES, TABLETS, ETC**). Approved calculators are:

Texas Instruments 30X series: TI-30Xa, TI-30X-IIS, TI-30XS
TI30 PLUS or TI30 PRO versions NOT PERMITTED

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 your 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.

Grading Information:

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

Grade Components and Major Assignments and Examinations:

Midterm 1: 20% (6-8pm Friday Sep 20, 2019)
Midterm 2: 25% (6-8pm Friday Oct 25, 2019)
Final Exam: 35% (12:30-3, Saturday Dec 7, 2019)
Group Problem-Solving Labs: 10%
Online Homework: 5%
Quizzes: 5%

Midterms and Final Exam: These exams are departmental. That is, all sections of Math 2425 will take the same exam and the same 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. You must provide a scantron brand form SC882-E for each exam. You may access recent previous midterms and some of the finals online. A link will be posted to Canvas. **Any student who scores below 50 on the final exam cannot receive a grade higher than D in the course. Any student who scores a 0 on the final exam will receive an F in the course.**

Online Homework: Homework will be assigned on a daily/weekly basis. A student will access the online homework directly through Canvas and must have access to this Pearson content since part of your grade will be based on the completion of homework assignments online. Your homework grade is based solely on the online homework.

Quizzes: Quizzes will be administered during your lab section each Monday. 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 Monday, 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 Wednesday, 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 20 minutes late you will be considered absent. Also, you may not leave lab early unless your group has turned in their lab. 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.

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 (Fri, 6-Sep-2019), 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 the census date, 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. Please email the instructor with requests.

Expectations for Out of Class Study: Beyond the time required to attend each class meeting and lab session, 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.

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.

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.

Course Schedule:

A list table with section numbers and tentative dates is attached to the end of this syllabus.

Communication:

Electronic Communication: 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.

CANVAS: We will be making heavy use of Canvas in this class. Copies of our syllabus will be located here under the syllabus section. In addition, under the course content section students will find review sheets for tests. Quiz and test grades may also be posted here. **Students should periodically log onto Canvas in order to check on their grades.** To access the course, go to the UTA website, click on the CANVAS link, and log in with your NetID and password. Click on the name of the course in the upper left module after logging in. **Students need to e-mail me if they have any questions about their grades. All graded papers returned to students should be kept in a safe place until the end of the semester in case they are ever needed to resolve a grade dispute.**

Institution Information:

UTA students are encouraged to review the below institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the Institutional Information page (http://www.uta.edu/provost/administrative-forms/course-syllabus/index.php) which includes the following policies among others:

- Drop Policy (Last day to drop: Friday Nov 1, 4pm)
- Disability Accommodations
- Title IX Policy
- Academic Integrity
- Student Feedback Survey
- Final Exam Schedule

Additional Information:

Disability Accommodations: Please provide required paperwork for accommodation no later than the census date, Friday Sep 6. If you require an accommodation based on disability, I would like to meet with you in the privacy of my office, during the first two weeks of the semester, to make sure you are appropriately accommodated.

Attendance: At the University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. 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. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

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 individuals with disabilities.

Student Success Programs:
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 by appointment, drop-in tutoring, etutoring, supplemental instruction, mentoring (time management, study skills, etc.), success coaching, TRIO Student Support Services, and student success workshops. For additional information, please email resources@uta.edu, or view the Maverick Resources website.

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 – 12:00p
Saturday	1:00p – 6:00p
Sunday	1:00p – 7:00p

Go to the Math Clinic webpage http://www.uta.edu/math/LRC/ 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.

University Tutorial & Supplemental Instruction (UTA Central Library): UTSI offers a variety of academic support services for undergraduate students, including: 60 minute one-on-one tutoring sessions, Start Strong Freshman tutoring program, and Supplemental Instruction. Office hours are Monday-Friday 8:00am-5:00pm. For more information visit www.uta.edu/utsi or call 817-272-2617.

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.

The Library's 2nd floor Academic Plaza offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library's hours of operation. http://library.uta.edu/academic-plaza

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381

Calculus II Course Schedule Fall 2019 (Tentative)

TEXT: Calculus, Early Transcendentals, 3rd edition, by Briggs, Cochran, Gillett (Pearson)

Dates	Sections	Topics
August 21 - September 16	8.3/8.1	Trigonometric Integrals
	8.2	Integration by Parts
	8.4	Trigonometric Substitutions
	8.5	Partial Fractions
	8.9	Improper Integrals
	10.2/10.1	Sequences
September 18 - September 20		Review
September 20, 6pm-8pm		Midterm 1: 8.1-8.7,8.9, 10.1, 10.2 (tent)
September 23 - October 21	10.3	Infinite Series
	10.4	The Divergence and Integral Test
	10.5	Comparison Tests
	10.6	Alternating Series
	10.7/10.8	Ratio and Root Tests
	11.1	Approximating Functions with Polynomials
	11.2	Properties of Power Series
	11.3	Taylor Series
	11.4	Working with Taylor Series
October 23 - October 25		Review
October 25, 6pm-8pm		Midterm 2: 10.3-10.8, 11.1-11.4 + M1 Sections (tent)
October 28 – November 25	6.3	Volume, Disk Method
	6.4	Volume, Shell Method
	6.5	Arc Length
	6.6	Surface Area
	6.7	Physical Applications
	12.1	Plane Curves and Parametric Equation
	12.2	Polar Coordinates
	12.3	Areas and Lengths in Polar Coordinates
December 2 - December 4		Review
December 9, Saturday		12:30- 3:00 PM Final Exam: All Covered Sections

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. – Saber Ahmed

Important Dates (2019)

Aug 21 (Wed)	First Day of Classes
Sep 2 (Mon)	Labor Day Holiday (Campus Closed)
Sep 6 (Fri)	Census Date & Deadline for ALL Make-up Exam Requests
Sep 20 (Fri)	Midterm 1, 6p-8p
Oct 25(Fri)	Midterm 2, 6p-8p
Nov 1 (Fri)	Last Day to Drop Classes (4 PM)
Nov 27-29	Thanksgiving (No classes, Campus Closed Thu & Fri)
Dec 4 (Wed)	Last Day of Classes
Dec 7 (Sat)	Final Exam: 12:30p-3p