Calculus II, Mathematics 2414, Section 001
Spring 2025

Instructor: Dr. Katie Anders
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Course Schedule: Class meets MW from 9:05-10:00 AM and TuTh from 8:30-9:25 AM in RBN 4025.

Course Website: You MUST activate your Canvas account. To do so, go to `https://www.uttyler.edu/canvas/`. This is also the address to login. If you are registered in the course, you already have access to the course. All important documents will be posted on Canvas.

Office hours: TuTh 9:30-11:00 in RBN 4046 and by appointment arranged by email

Required Text: OpenStax *Calculus Volume 2* is an open access textbook, freely available online at `https://openstax.org/details/books/calculus-volume-2`. At this link, you can read the book online, download a PDF, or buy a print copy. The digital ISBN-13 is 978-1-947172-14-2, and the paperback ISBN-13 is 978-1-50669-807-6.

Course Description: A study of differentiation and integration of transcendental functions, polar coordinates, techniques of integration, sequences, series, and improper integrals.

Course Prerequisites: A grade of C or better in Calculus I (Math 2413 or equivalent).

Course Outline: We will cover the material corresponding to Chapters 2, 3, 5, 6, 7 in the textbook, in part or in full. For more details, see the tentative schedule of topics at the end of this document.

Student Learning Outcomes: Upon completion of this course, students should be able to do the following:

- Apply the ideas of definite integrals to solve problems of areas under curves and between curves, volumes of cylindrically symmetric objects, work done by a constant or variable force, and other assorted applications (Analytic, Critical Thinking)
- Describe the meaning of an improper integral and apply the concepts of limit, convergence, and divergence to evaluate some classes of improper integrals (Analytic, Critical Thinking)
- Define sequences and series and determine convergence or divergence of them (Critical Thinking, Communication)
- Find the Taylor and Maclaurin series to represent elementary functions and apply Taylor or Maclaurin polynomials to the integration of functions not integrable by conventional methods (Analytic, Critical Thinking)
- Apply the ideas of polar coordinates to find areas, lengths of curves, and representations of conic sections (Analytic, Critical Thinking)

- Persuasively communicate mathematical ideas using clear and concise mathematical language, including terminology, notation, and grammar (Communication)

Grading: Scores will be posted on Canvas. After the end of the semester, final course grades will be available on `my.uttyler.edu`. A final course grade of 90% is guaranteed to be at least an A, a final course grade of 80% is guaranteed to be at least a B, a final course grade of 70% is guaranteed to be at least a C, and a final course grade of 60% is guaranteed to be at least a D. All grades below D will be F.

Homework: 5%
Quizzes: 15%
Midterm exams: 15% each
Final exam: 20%

If you have any questions about the grading of a particular quiz or exam, you must contact me no more than one week after the day I return the graded quiz or exam in class, whether you are present during that class or not. If you have any questions about the grading of a particular homework assignment, you must contact me no more than one week after the day the homework is due.

Attendance: It is your responsibility to attend class. Attendance is mandatory. This means, among other things, coming to class on time and prepared. Before class begins, you should silence and put away cell phones and any other electronic devices. Students are responsible for all announcements made during lecture.

Homework: Homework will be assigned each class period via the online platform WebWork. Your temporary WebWork password is `uttyler` in all lowercase letters. You should change the password immediately upon logging into WebWork for the first time. Your WebWork username has already been sent to you in an email to your patriots email account, provided you registered for the course before noon on January 8. If you registered after that date, you must email Dr. Anders to let her know you need an account. This is your responsibility, and you must do it immediately. The link to our course's WebWork page was also provided to you in the same email and is posted in a Canvas announcement. More information on logging into and using WebWork is available on Canvas in a separate document.

In general, a new homework assignment will become available on WebWork after each class. It will usually be due by 5:00 AM on the upcoming Wednesday. The WebWork system provides you with instant feedback on your answers, as well as unlimited attempts to complete most problems. You should use this to your advantage. You are required to successfully complete all assigned problems on WebWork. **Late homework will NOT be accepted.** When computing your final homework grade, I will use your total score on all the WebWork problems. For example, if there are a total

of 150 problems throughout the semester, and you successfully complete 120 of them, your homework grade will be 80%.

Quizzes: There will be weekly quizzes given each Wednesday unless it is an exam week. The two lowest quiz scores will be dropped at the end of the semester. Quizzes will usually be given at the beginning of the class period. If you are tardy on the day of a quiz, you do not get extra time on the quiz.

Exams: There will be 4 midterm exams. A list of the test dates is given below. This list is preliminary and subject to change; at least one week advance notice of any change in test dates will be given.

Exam 1: Thursday, February 6
Exam 2: Tuesday, March 4
Exam 3: Thursday, March 27
Exam 4: Thursday, April 17

Final Exam:. The final exam will be cumulative and will be on Tuesday, April 29 from 8:00-10:00 AM in the usual classroom.

Cell Phones: Cell phones are not permitted in class. You must silence them and put them away before class begins. During quizzes and exams, your cell phone may NOT be in your chair or lap.

Calculators: The use of calculators and other electronic devices, including cell phones, during exams is strictly prohibited, so study accordingly.

Make-ups: Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, students participating in a debate contest, etc.) or for religious observation will be granted. For all make-ups of this type, prior notification of at least one week and documentation are required. Other make-ups are granted only in extreme cases and at the sole discretion of the instructor. Prior notification is still required. **Under no circumstances will make-ups be granted without prior notification.** Leaving early for a break is NOT grounds for a make-up, so please make your travel plans accordingly. In almost all cases, missed quizzes will be assigned a 0. Keep in mind that the 2 lowest quizzes will be dropped at the end of the semester.

Academic Integrity: Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook and unassigned problems, notes from class, assigned homework problems, your fellow Math

2414 students, the Math Learning Center, and your instructor. Email is the best way to contact me. I reply to email from 9:00 AM to 4:00 PM Monday-Friday.

A note about a resource NOT allowed in this course: while the internet may be a valuable resource, using it to unethically acquire answers for your work will be considered a violation of academic integrity and processed accordingly. Similarly, copying answers from other students' assignments, past or present, violates the idea that your work must be your own.

The use of Artificial Intelligence is not permitted in this course at all. All work submitted by a student in this course should be their own. The assignments and assessments are designed to support your learning. Doing your own work, without assistance from artificial intelligence, is an essential part of mastering course learning objectives. In this course, you are expressly forbidden from using ChatGPT or any other artificial intelligence (AI) tools for any stages of the work process, including brainstorming. Deviations from these guidelines will be considered a violation of UT Tyler's Honor Code and academic integrity policies.

University Policies: Monday, January 27 is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. Monday, March 31 is the last day to withdraw from one or more courses. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Social Security and FERPA Statement, and more, see the University Policies and Information file on this course's Canvas page.

Contingency Plans: If the entire university moves all classes to Zoom at any point this semester, there will be some changes to the syllabus. These are NOT options that an individual student may choose.

If face-to-face classes are suspended for a short time, quizzes and tests will be moved so that they can be taken when face-to-face class resumes. In this case, there will be a Canvas announcement giving the new dates for quizzes and tests.

If face-to-face classes are suspended for a long period of time in the middle of the semester, some quizzes and tests may be eliminated, combined, and/or rescheduled, and the weights used to compute course averages may be adjusted.

If the entire university is not returning to face-to-face classes after some point late in the semester, the following weights will be used to compute your course average. In this case, the final assessment will NOT be cumulative.

Homework: 5%
Quizzes: 15%
Midterm exams: 17.5% each
Final exam: 10%

If all university classes must migrate online at some point, then online proctoring may be utilized. For online proctoring, students will need high speed internet, access to Zoom, a webcam, and a microphone. Please note that students can use university computer labs or the university library as a place to take an assessment being proctored online.

Tentative Schedule:. This schedule may change as the semester unfolds.

Week	Dates	Sections
1	January 13 - January 17	1.5, 1.6, 3.1
2	January 20 - January 24	3.2, 3.3
3	January 27 - January 31	3.4, 3.7
4	February 3 - February 7	3.7, Exam 1
5	February 10 - February 14	2.1, 2.2, 2.3
6	February 17 - February 21	2.3, 2.4
7	February 24 - February 28	2.5, 5.1
8	March 3 - March 7	Exam 2, 5.2, 5.3
9	March 10 - March 14	5.4, 5.5, 5.6
10	March 17 - March 21	NO CLASS
11	March 24 - March 28	Series, Exam 3
12	March 31 - April 4	6.1, 6.2
13	April 7 - April 11	6.3, 6.4
14	April 14 - April 18	7.1, 7.2, Exam 4
15	April 21 - April 25	7.3, 7.4
16	April 29	Final Exam